

Water =

Price Water

Improvement  
Dist

✓ Mr. Palmer =

(801) 637-6350

✓ w/ OIM on appl.

→ Dave Barge ← 303-793-4916  
5 well project.

36 145-9E

---

Don Jarvis

How deep casing for this section?

STATE OF UTAH  
DIVISION OF OIL, GAS AND MINING

ML

**APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK**

1a. Type of Work DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/>		5. Lease Designation and Serial No. D-39335
b. Type of Well Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> STRATIGRAPHIC WELL (Single Zone <input type="checkbox"/> Multiple Zone <input type="checkbox"/>		6. If Indian, Allottee or Tribe Name N/A
2. Name of Operator RIVER GAS OF UTAH, INC. (TEL 205/759-3282)		7. Unit Agreement Name DRUNKARDS WASH UNIT #UTU67921X
3. Address of Operator 12031 LAKE NICOL ROAD, TUSCALOOSA, ALABAMA 35406		8. Farm or Lease Name STATE OF UTAH
4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface 1980' FEL & 755' FNL (NW $\frac{1}{4}$ OF NE $\frac{1}{4}$ )		9. Well No. RGU #1
At proposed prod. zone SAME		10. Field and Pool, or Wildcat STRAT TEST TO FERRON COAL GROUP
14. Distance in miles and direction from nearest town or post office* THREE (3) MILES SOUTHWEST OF PRICE, UTAH		11. 00, Sec., T., R., M., or 81k. SECTION 36, T.14S., R.9E., S.L.B. & M.
15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drilg. line, if any) 1980' FEL	16. No. of acres in lease 485.9	12. County or Parrish CARBON
13. Distance from proposed location* to nearest well, drilling, completed, or applied for, on this lease, ft. NONE	17. No. of acres assigned to this well N/A...STRAT TEST	13. State UTAH
19. Proposed depth 2200' ERSD	20. Rotary or cable tools ROTARY	
21. Elevations (Show whether DF, RT, GR, etc.) 5733' surveyed elevation (5810' per topographical map)		22. Approx. date work will start* Immediately upon permit issuance.
23. PROPOSED CASING AND CEMENTING PROGRAM		
Size of Hole	Size of Casing	Weight per Foot
*8 3/4"	6 5/8" (10)	22.2 lb
*5 7/8"	4" (10)	11.3 lb
Setting Depth	Quantity of Cement	
200'	30 sacks cement to surface	
1500'	40 sacks of Class "A" cement to surface	

320 sacks of cement will be used to plug well from top to bottom.

\*Cement and casing program can be revised if required by Board of Oil, Gas and Mining.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24. I hereby certify that this report is true and complete to the best of my knowledge.

Signed Joseph L. Stephens Title Land Manager Date JAN. 16, 1991

(This space for Federal or State office use)

API NO. 43-007-30624

Approval Date

Approved by \_\_\_\_\_  
 Conditions of approval, if any:

Title

APPROVED BY THE STATE  
 OF UTAH DIVISION OF  
 OIL, GAS, AND MINING

DATE: 1-24-91

BY: Jeff Matthews

WELL SPACING: 615-2-3

COPY

TOWNSHIP 14 SOUTH

RANGE 9 EAST

5439.90' MEASURED

S 89° 28' 30" W MEASURED

755.48'

1979.68'

RIVER GAS OF UTAH, INC.  
R.G.U. NO.1  
SET 5/8" x 24" REBAR  
ELEV. = 5797.8

N 0° 30' 30" W (RECORDED)

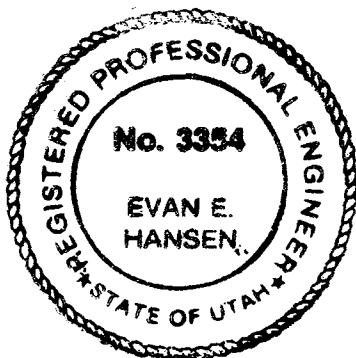
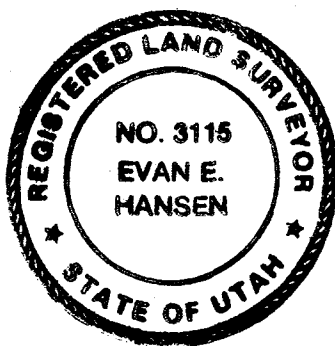
2654.80 MEASURED  
2654.75 RECORDED

36

**BASIS OF ELEVATION**

IS 5733 AS INDICATED ON THE NE COR.  
SEC. 36, T 14 S, R 9 E, S.L.B. & M.  
AS SHOWN ON THE PRICE QUADRANGLE  
7.5 MINUTE SERIES.

SCALE: 1" = 1000'



**ENGINEER'S CERTIFICATE**

I, EVAN E. HANSEN, DO HEREBY CERTIFY THAT I AM A REGISTERED LAND SURVEYOR AND PROFESSIONAL ENGINEER HOLDING CERTIFICATES NO. 3115 AND NO. 3354 AS PRESCRIBED UNDER THE LAWS OF THE STATE OF UTAH. I FURTHER CERTIFY THAT I HAVE MADE A SURVEY OF THE TRACT OF GROUND SHOWN AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.

Evan E. Hansen  
EVAN E. HANSEN

JAN 12, 1991  
DATE

RIVER GAS OF UTAH, INC.

ADDITIONAL DRILLING INFORMATION

ATTACHMENT #1

**BASIS OF BEARING**

BASIS OF BEARING N 0° 30' 30" W RECORDED BETWEEN THE EAST QUARTER CORNER AND THE NORTHEAST CORNER OF SECTION 36, TOWNSHIP 14 SOUTH, RANGE 9 EAST, SALT LAKE BASE AND MERIDIAN AND IS THE UTAH STATE PLANE COORDINATE SYSTEM AS ESTABLISHED BY THE CARBON COUNTY SURVEYOR'S OFFICE.

**LEGEND**

- FOUND ROCK SECTION CORNER
- FOUND BRASS CAP SECTION CORNER
- ◇ FOUND BRASS CAP QUARTER CORNER
- ◇ SEARCHED FOR BUT NOT FOUND

SECTION 36, T 14 S, R 10 E, S.L.B. & M.

**Empire Engineering**

1665 E. SAGEWOOD RD. PRICE, UTAH 84501

RIVER GAS OF UTAH, INC.

R.G.U. NO. 1

Drawn By: TH

Approved By: EEH

Drawing No.

Date: 1-12-91

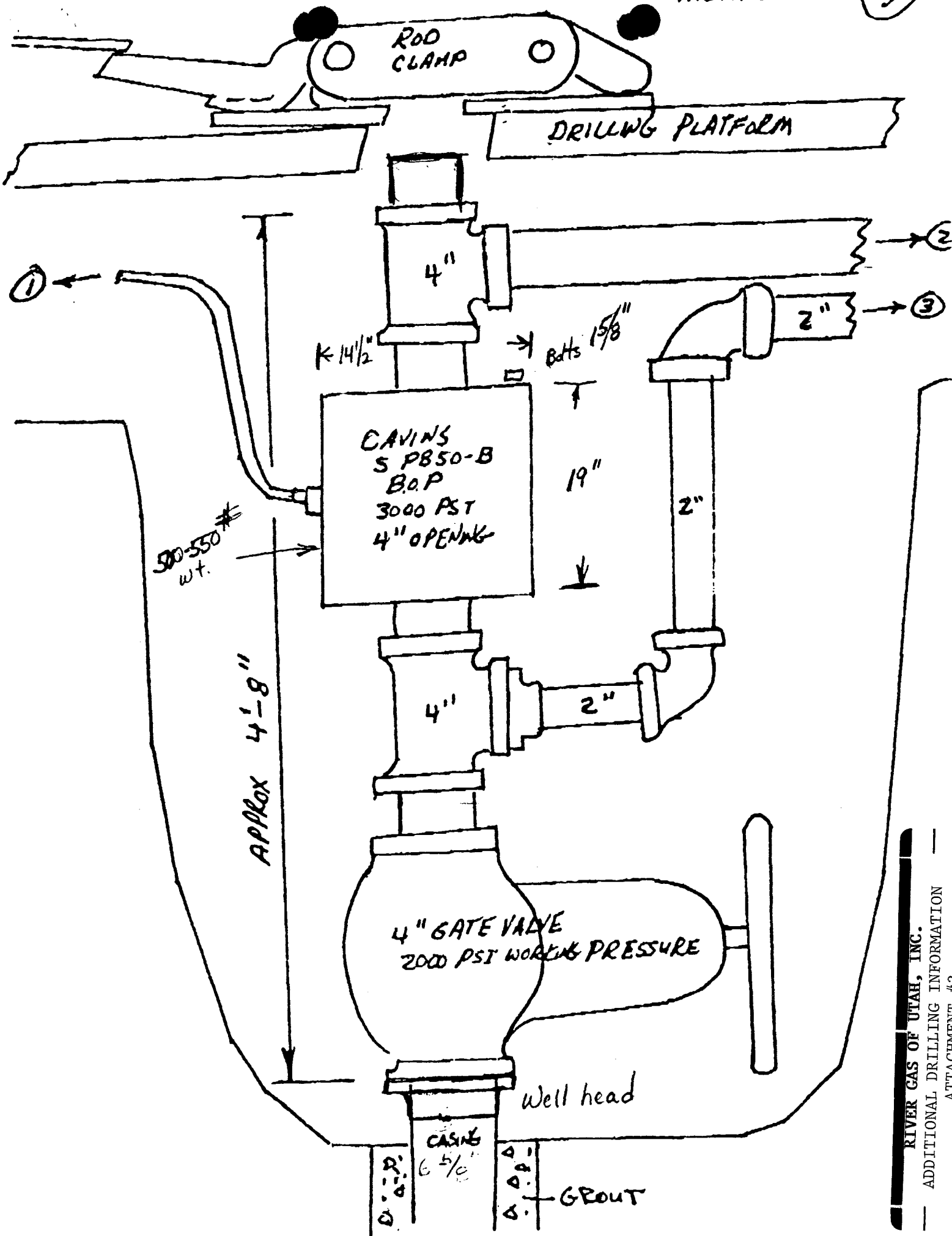
Scale: 1" = 1000'

EEOG-101 A

RIVER GAS OF UTAH, INC.  
— ADDITIONAL DRILLING INFORMATION —  
ATTACHMENT #2

RE: Use of Water During Drilling Operations  
January 10, 1991

As stated, water which we will be using is to be purchased from the Price River Water Improvement District (Tel. 801-637-6350). This has been arranged by Mr. Michael J. Farrens, Drilling Supervisor for River Gas of Utah, Inc. He has been in contact with Mr. Phillip Palmer. Mr. Farrens has discussed this arrangement with Mark Page of the Division of Water Rights (Tel. 801-637-1303) over the telephone. The Division of Water Rights is to furnish the Oil & Gas Division with a letter of approval concerning this matter.



DESIGNATION OF AGENT OR OPERATOR - FORM 5

The undersigned is, on record, the holder of oil and gas lease

LEASE NAME: STATE OF UTAH

LEASE NUMBER: 39335

and hereby designates

NAME: RIVER GAS OF UTAH, INC.

ADDRESS: 3600 Watermelon Road, Suite 204, Northport, Alabama 35476

as his agent/operator, with full authority to act in his behalf in complying with the terms of the lease and regulations applicable thereto and on whom the Division Director or Authorized Agent may serve written or oral instructions in securing compliance with the Oil and Gas Conservation General Rules and Procedural Rules of the Board of Oil, Gas and Mining of the State of Utah with respect to (describe acreage to which this designation is applicable):

Township 14 South, Range 9 East, SLM.

Section 25: SE/4

Section 36: N/2

containing 480.00 acres, more or less,  
Carbon County, Utah

It is understood that this designation of agent/operator does not relieve the lessee of responsibility for compliance with the terms of the lease and the Oil and Gas Conservation General Rules and Procedural Rules of the Board of Oil, Gas and Mining of the State of Utah. It is also understood that this designation of agent or operator does not constitute an assignment of any interest in the lease.

In case of default on the part of the designated agent/operator, the lessee will make full and prompt compliance with all rules, lease terms or orders of the Board of Oil, Gas and Mining of the State of Utah or its authorized representative.

The lessee agrees promptly to notify the Division Director or Authorized Agent of any change in this designation.

Effective Date of Designation 1-15-91

By: Rg Lunn

(signature)

Company TEXACO INC.

Title: Attorney-in-Fact

Address P. O. Box 2100

(303) 793-4047

Denver, Colorado 80201

Phone:



Texaco USA

PO Box 2100  
Denver CO 80201  
1801 DTC Boulevard  
Denver CO 80202

RECEIVED  
1-16-91

VIA OVERNIGHT MAIL

January 15, 1991

RIVER GAS OF UTAH, INC.

ATTACHMENT #5

Page 1 of 2

TI #U-2866  
Designation of Operator  
State of Utah Lease #ML-39335  
Carbon County, Utah

COPY

Mr. Edward W. Bonner  
Minerals Section Manager  
State of Utah Department of Natural Resources  
Division of State Lands and Forestry  
3 Triad Center, Suite 400  
Salt Lake City, Utah 84180-1204

Dear Mr. Bonner,

At the request of Mr. Joey Stephenson, Land Manager for River Gas of Utah, Inc., I forward to you the referenced Designation of Operator Form.

Should you have any questions or comments do not hesitate to call (303) 793-4047.

Very truly yours,

TEXACO INC.

J. R. French, Jr.  
Western E & P Region

jrf/pc

cc: Mr. Joey Stephenson

## DESIGNATION OF OPERATOR

The undersigned is, on the records of the Department of Natural Resources, Division of State Lands & Forestry, holder of lease. ML 39335 :

and hereby designates

NAME: River Gas of Utah, Inc.

ADDRESS: 3600 Watermelon Road, Suite 204, Northport, Alabama 35476

as his operator and local agent, with full authority to act in his behalf in complying with the terms of the lease and regulations applicable thereto and on whom the Director of the Division of State Lands & Forestry or his representative may serve written or oral instructions in securing compliance with the Rules and Regulations Governing the Issuance of Mineral Leases with respect to (described acreage to which this designation is applicable):

Township 14 South, Range 9 East, SLM.

Section 25: SE/4

Section 36: N/2

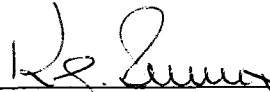
containing 480.00 acres, more or less, Carbon County, Utah

It is understood that this designation of operator does not relive the lessee of responsibility for compliance with the terms of the lease and the Rules and Regulations. It is also understood that this designation of operator does not constitute an assignment of any interest in the lease.

In case of default on the part of the designated operator, the lessee will make full and prompt compliance with all regulations, lease terms, or orders of the Director, Division of State Lands & Forestry or his representative.

The lessee agrees promptly to notify the Division of State Lands & Forestry of any change in the designated operator.

TEXACO INC.



Attorney-in-Fact (Signature of Lessee)

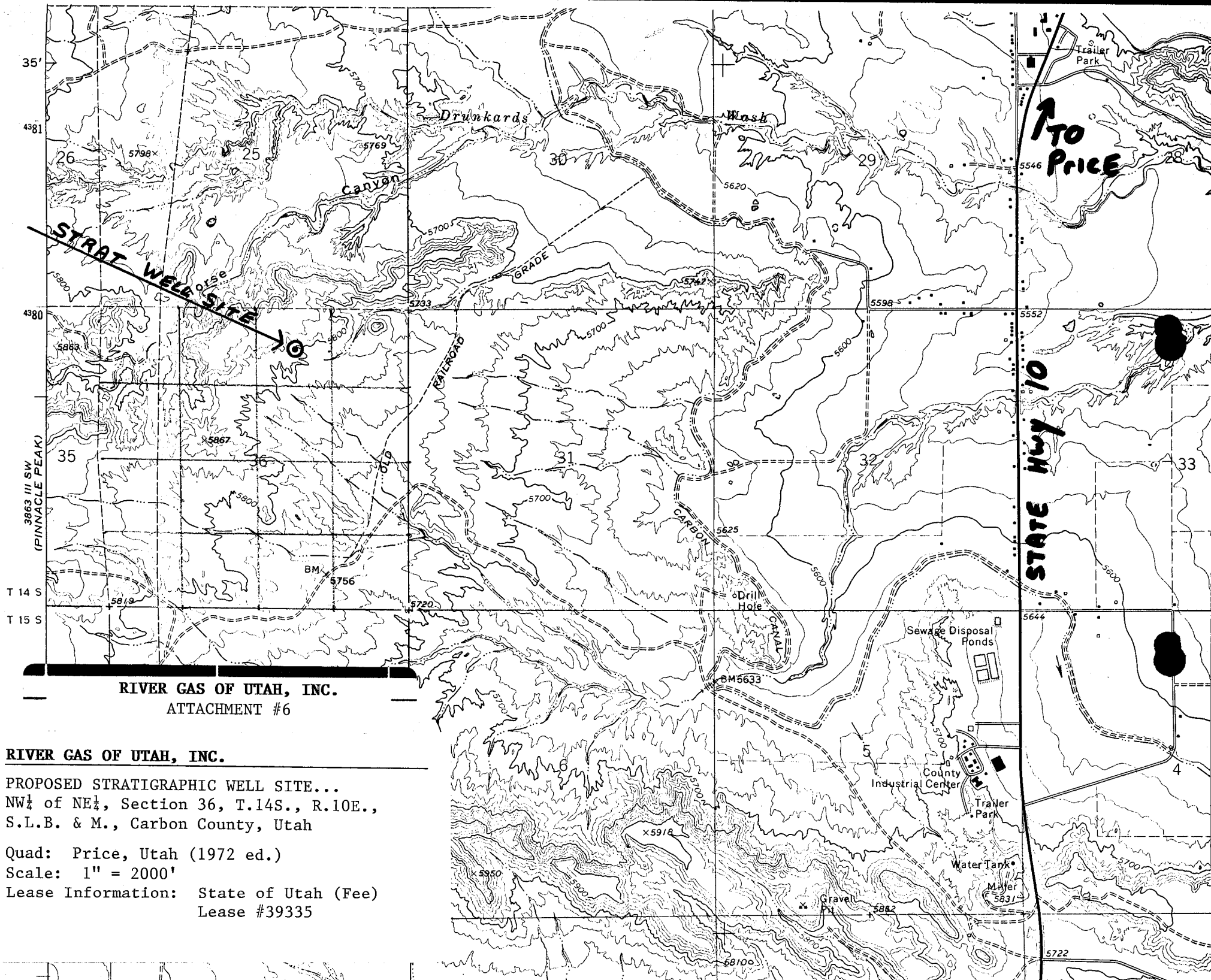
January 15, 1991

(Date)

P. O. Box 2100  
Denver, Colorado 80201

(Address)





RIVER GAS OF UTAH, INC.  
ATTACHMENT #6

RIVER GAS OF UTAH, INC.

PROPOSED STRATIGRAPHIC WELL SITE...  
NW $\frac{1}{4}$  of NE $\frac{1}{4}$ , Section 36, T.14S., R.10E.,  
S.L.B. & M., Carbon County, Utah

Quad: Price, Utah (1972 ed.)

Scale: 1" = 2000'

Lease Information: State of Utah (Fee)  
Lease #39335

## RIVER GAS OF UTAH, INC.

## Additional Drilling Information

RGU NO. 1755' FNL 1980' FEL Sec. 36, T14S., R9E., Carbon Co., UT.

## 2.1 Telephone numbers for additional information:

Michael J. Farrens - Office 205-759-1161  
Drilling Supervisor Home 205-758-8535

Joey Stephenson - Office 205-759-3282  
Land Manager

David Chambers - Office 205-759-3282  
President

## 2.2 State Lease: Serial No. 39335

## 2.3 This core hole will be drilled in a Federal Unit. The Unit name is Drunkards Wash Unit. The Unit No. is UTU 67921X.

## 2.4 See attachment #1. (Survey Plat)

## 2.5 Water will be purchased from Price River Water Improvement District. See attachment #2.

## 2.6 Drilling Program

## 2.6.1 The following geologic units are expected to be penetrated in the corehole.

<u>Formation/Unit</u>	<u>Corehole Depth (ft)</u>
Upper Mancos Shale	Surface
Marker Bed	1630
Ferron Sandstone	Absent
Ferron Coals	1730
Lower Ferron Sandstone	1820
Tununk Shale	2125
TD	2200

## 2.6.2 The Ferron Coals and lower Ferron Sandstone will be the only gas and water bearing formations. The top is 1730', bottom 2125'. The core hole will be plugged with 320 sacks cement from top to bottom to protect all gas and water bearing formations.

RGU  
Page 2

- 2.63 A Cavins 3000 psi BOP will be used and tested twice a week at 1500 psi for 30 mins. A low pressure test of 200 psi for 30 mins. will also be run. All test will be recorded in a Driller Report Book. Physical operation of BOP's will be checked on each trip.

See attachment # 3 for Schematic.

- 2.64 Will change out rigs at 1500' from rotary rig to a small continuous core rig.

- 2.65 The 8 3/4" hole will be drilled from surface to 200'. Water will be used with sweeps of Bentonite. The 5 7/8" hole will be drilled from 200' to 1500'. Air will be used; 350 psi/850 cu. ft. The 4" hole will be drilled with water and Bentonite. The circulation system is 30 Bbls. No monitoring equipment will be used. A pit liner will be used in reserve pit.

- 2.66 Logging Program:

Surface to 200' Gamma Ray  
200' to 1500' Density, Gamma Ray, Caliper  
1500-2200 Density, Gamma Ray, Caliper,  
Sonic, Neutron porosity,

Coring Program

1500'-2200' Hole site HX (4.0")

- 2.67 We expect 1000 psi for bottom hole pressure. No other hazards are expected.

- 2.68 None

This information compiled by Michael J. Farrens.

BENEFICIARY:  
STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF STATE LANDS AND FORESTRY  
#3 TRIAD CENTER SUITE 400  
355 WEST TEMPLE  
SALT LAKE CITY, UTAH 84180-1204

DECEMBER 14, 1990  
LETTER OF CREDIT NO: 5304606

RIVER GAS OF UTAH, INC.

ATTACHMENT #8

Page 1 of 2

GENTLEMEN:

WE HEREBY ESTABLISH OUR IRREVOCABLE STANDBY LETTER OF CREDIT IN FAVOR OF THE DIRECTOR OF THE DIVISION OF STATE LANDS AND FORESTRY OF THE STATE OF UTAH FOR THE ACCOUNT OF RIVER GAS OF UTAH, INC. 12031 LAKE NICOL ROAD, TUSCALOOSA, ALABAMA 35406 FOR THE AGGREGATE AMOUNT OF EIGHTY THOUSAND DOLLARS (\$80,000.00) AVAILABLE BY YOUR DRAFTS AT SIGHT ON THE BANK WHEN DRAWN IN ACCORDANCE WITH THE TERMS AND ACCOMPANIED BY THE DOCUMENTS LISTED UNDER PART C BELOW:

A. THIS LETTER OF CREDIT IS ISSUED BECAUSE THE OPERATOR IS OR WILL BE ENGAGED IN DRILLING, REDRILLING, DEEPENING, REPAIRING, OPERATING AND PLUGGING AND ABANDONMENT A WELL OR WELLS AND RESTORING THE WELL SITE OR SITES ON LANDS OWNED BY THE STATE OF UTAH FOR THE PURPOSES OF OIL OR GAS PRODUCTION AND/OR THE INJECTION AND DISPOSAL OF FLUIDS IN CONNECTION THEREWITH FOR THE FOLLOWING DESCRIBED LAND OR WELL:

TO COVER ALL WELLS DRILLED ON LAND OWNED BY THE STATE OF UTAH.

B. THIS LETTER OF CREDIT IS SPECIFICALLY ISSUED AT THE REQUEST OF THE OPERATOR TO ASSURE THAT THIS FUND WILL BE AVAILABLE DURING THE TIME THAT THE WELLS REFERENCED ABOVE ARE ACTIVE. WE ARE NOT A PARTY TO, NOR BOUND BY, THE TERMS OF ANY AGREEMENT BETWEEN YOU AND THE OPERATOR OUT OF WHICH THIS LETTER OF CREDIT MAY ARISE.

C. DRAFTS DRAWN UNDER THIS LETTER OF CREDIT MUST BE ACCOMPANIED BY AN AFFIDAVIT SIGNED BY THE DIRECTOR OF THE DIVISION OF STATE LANDS AND FORESTRY STATING THAT:

1. ANY WELL IS DEEMED NECESSARY FOR PLUGGING AND ABANDONMENT AND THE OPERATOR HAS NOT FULFILLED SUCH OBLIGATION UNDER THE OIL AND GAS CONSERVATION GENERAL RULES OF THE STATE OF UTAH.
2. THE DRAFT IS IN THE ESTIMATED COST OF PLUGGING EACH WELL UP TO THE AGGREGATE AMOUNT OF THE LETTER OF CREDIT.

WE WILL BE ENTITLED TO RELY UPON THE STATEMENTS CONTAINED IN THE AFFIDAVIT AND WILL HAVE NO OBLIGATION TO INDEPENDENTLY VERIFY ANY STATEMENTS CONTAINED THEREIN.

\*\*\*\*\*CONTINUED ON NEXT PAGE\*\*\*\*\*

Amsouth Bank N.A.  
1930 5th Avenue North  
Birmingham, Alabama 35203-2810 USA

International Department

TELEX: 6827189  
Cable: AMSOUBKSHM  
S.W.I.F.T. AMSB US 44

RIVER GAS OF UTAH, INC.

ATTACHMENT #8

Page 2 of 2

BENEFICIARY:  
STATE OF UTAH, DIVISION OF STATE

PAGE 02  
DECEMBER 14, 1990

LETTER OF CREDIT NO S304606

EACH DRAFT HEREUNDER MUST BE LISTED AND ENDORSED ON THE REVERSE SIDE OF THIS LETTER OF CREDIT, AND THIS LETTER OF CREDIT MUST BE ATTACHED TO THE LAST DRAFT WHEN THE CREDIT HAS BEEN EXHAUSTED. DRAFTS MAY BE PRESENTED AT THE OFFICE OF THIS BANK NO LATER THAN 2:00 P.M. BIRMINGHAM ALABAMA TIME ON DECEMBER 13, 1991, AND BEAR THE CLAUSE "DRAWN UNDER THE AMSOUTH BANK N.A., BIRMINGHAM, ALABAMA, BANK LETTER OF CREDIT NO. S304606, DATED DECEMBER 14, 1990".

WE HEREBY ENGAGE WITH THE BONA FIDE HOLDERS OF THIS DRAFT AND/OR DOCUMENTS PRESENTED UNDER AND IN COMPLIANCE WITH THE TERMS OF THIS LETTER OF CREDIT THAT SUCH DRAFT AND/OR DOCUMENTS WILL BE DULY HONORED UPON PRESENTATION TO US. OUR OBLIGATIONS HEREUNDER SHALL NOT BE SUBJECT TO ANY CLAIM OR DEFENSE BY REASON OF THE INVALIDITY, ILLEGALITY, OR UNENFORCEABILITY OF ANY OF THE AGREEMENTS UPON WHICH THIS LETTER OF CREDIT IS BASED.

THIS LETTER OF CREDIT IS SUBJECT TO UNIFORM CUSTOMS AND PRACTICE FOR DOCUMENTARY CREDITS (1983 REVISION) ICC PUBLICATION NO. 400.

*Shelly J. Brakefield*  
AUTHORIZED SIGNATURE

*Joanne B. Hoover*  
AUTHORIZED SIGNATURE



**FAXED**  
4:10 P.M.

**THE RIVER GAS CORPORATION**

3600 Watermelon Road, Suite 204  
Northport, Alabama 35476  
Phone (205) 759-3282  
Fax (205) 759-3188

FROM: JOEY STEPHENSON  
Land Department  
3600 Watermelon Road  
Suite 204  
Northport, Alabama 35476  
Telephone: (205) 759-3282  
Telefax: (205) 759-3188

DATE: 1/16/91

TO: BRAD HILL

SUBJECT: RIVER GAS OF UTAH STRAT WELL PERMIT APPLICATION

=====

MESSAGE:

I am sending the original APD out today by United Parcel Service so that you should have it tomorrow. Please advise if I have omitted any required information.

This transaction consists of 15 page(s) including this cover page. If an incomplete transaction is received, please contact the sender at The River Gas Corporation, Land Department, (205) 759-3282. Thank you.



## THE RIVER GAS CORPORATION

3600 Watermelon Road, Suite 204  
Northport, Alabama 35476  
Phone (205) 759-3282  
Fax (205) 759-3188

January 16, 1991

UNITED PARCEL SERVICE

RECEIVED  
JAN 17 1991

Mr. Brad Hill  
Utah Board of Oil, Gas and Mining  
Suite 350, 3 Triad Center  
355 West North Temple  
Salt Lake City, Utah 84180-1203

DIVISION OF  
OIL, GAS & MINING

RE: Stratagraphic Well Permit Application -  
RGU-1, NW $\frac{1}{4}$  of NE $\frac{1}{4}$ , Section 36, T.14S., R.10E., S.L.B.&M.  
Carbon County, Utah

Dear Mr. Hill:

Enclosed is an original and a copy of an Application for Permit to Drill (APD) as described above. I am sending you a copy of this APD over the telecopier so that you can begin reviewing it today. Attached to this APD is the following information:

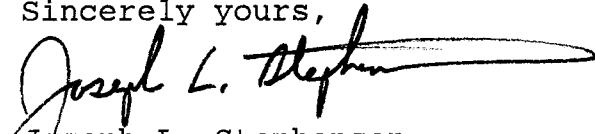
- Attachment #1 - Copy of survey plat of proposed well site. An original plat will be sent to you by the engineer who prepared it.
- Attachment #2 - Information regarding use of water at the site
- Attachment #3 - Schematic of BOP
- Attachment #4 - Original Designation of Agent or Operator ("Form 5")
- Attachment #5 - Reference to Designation of Operator form sent to State Lands and Forestry Division
- Attachment #6 - Portion of topographical map indicating proposed well site
- Attachment #7 - Additional drilling information furnished according to State regulations
- Attachment #8 - Evidence of bond sent to State Lands and Forestry Division

Mr. Brad Hill  
January 16, 1991  
Page Two

Also, please accept this letter as our request that all information be kept confidential that is eligible for such consideration regarding this permit. This request is made in accordance with your regulation R615-2-11.

I confirmed with Mr. Edward W. Bonner yesterday that his office was in receipt of the blanket bond. I will call you after you have had an opportunity to review this request. In the meantime, if you have any questions, please call me.

Sincerely yours,



Joseph L. Stephenson  
Land Manager for River Gas of Utah, Inc.

Enc.

cc: Mr. Edward W. Bonner

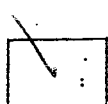


OPERATOR Public Gas of Utah, Inc. 1-1000 DATE 1-20-91  
WELL NAME RGU #1  
SEC NW 36 T 14S R 9E COUNTY Carbon

43-007-30109  
API NUMBER

Federal (1)  
TYPE OF LEASE

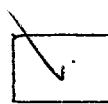
CHECK OFF:



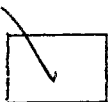
PLAT.



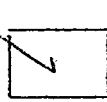
BOND



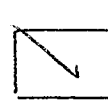
NEAREST  
WELL



LEASE



FIELD  
SLBM



POTASH OR  
OIL SHALE

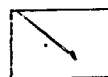
PROCESSING COMMENTS:

Unit approved by BFM 10-28-90 - Unit still in P.O.D.

Due to meeting w/ RPTF - BFM we felt no ROCC was needed.  
Water Permit OK'd thru Price Waterhouse

APPROVAL LETTER:

SPACING:

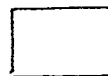


R615-2-3

Dunkards Wash  
UNIT



R615-3-2



N/A  
CAUSE NO. & DATE



R615-3-3

STIPULATIONS:

cc: State Lands



State of Utah  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

Norman H. Bangerter

Governor

Dee C. Hansen

Executive Director

Dianne R. Nielson, Ph.D.

Division Director

355 West North Temple

3 Triad Center, Suite 350

Salt Lake City, Utah 84180-1203

801-538-5340

January 24, 1991

River Gas of Utah, Inc.  
12031 Lake Nicol Road  
Tuscaloosa, Alabama 35406

Gentlemen:

Re: RGU #1 - NW NE Sec. 36, T. 14S, R. 9E - Carbon County, Utah  
755' FNL, 1980' FEL

Approval to drill the referenced well is hereby granted in accordance with Section 40-6-18, Utah Code Annotated, as amended 1983; and predicated on R615-2-3, Oil and Gas Conservation General Rules.

In addition, the following actions are necessary to fully comply with this approval:

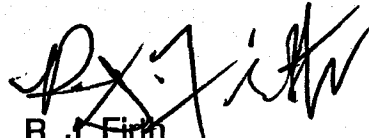
1. Spudding notification within 24 hours after drilling operations commence.
2. Submittal of an Entity Action Form within five working days following spudding and whenever a change in operations or interests necessitates an entity status change.
3. Submittal of the Report of Water Encountered During Drilling, Form 7.
4. Prompt notification if it is necessary to plug and abandon the well. Notify R. J. Firth, Associate Director, (Office) (801) 538-5340, (Home) 571-6068, or Jim Thompson, Lead Inspector, (Home) 298-9318.
5. Compliance with the requirements of R615-3-20, Gas Flaring or Venting, Oil and Gas Conservation General Rules.

Page 2  
River Gas of Utah, Inc.  
RGU #1  
January 24, 1991

6. Prior to commencement of the proposed drilling operations, plans for facilities for disposal of sanitary wastes at the drill site shall be submitted to the local health department. These drilling operations and any subsequent well operations must be conducted in accordance with applicable state and local health department regulations. A list of local health departments and copies of applicable regulations are available from the Division of Environmental Health, Bureau of General Sanitation, telephone (801) 538-6121.
7. This approval shall expire one (1) year after date of issuance unless substantial and continuous operation is underway or an application for an extension is made prior to the approval expiration date.

The API number assigned to this well is 43-007-30129.

Sincerely,



R. J. Firth  
Associate Director, Oil & Gas

tas  
Enclosures  
cc: Bureau of Land Management  
Division of State Lands  
J. L. Thompson  
we14/1-4

Division of Oil, Gas and Mining  
PHONE CONVERSATION DOCUMENTATION FORM

Route original/copy to:

☒ Well File RGU #1

☐ Suspense

☒ Other

(Return Date) \_\_\_\_\_

(To - Initials) \_\_\_\_\_

LCR

TAS

(Location) Sec 36 Twp 145 Rng 9E

(API No.) 43-007-30129

1. Date of Phone Call: 1-28-91 : Time: 8:35 Am

2. DOGM Employee (name) Don Staley (Initiated Call ☐)  
Talked to:

Name Mike Farrens (Initiated Call ☐) - Phone No. ( )

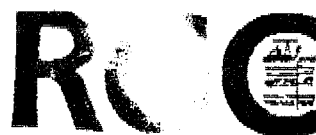
of (Company/Organization) River Gas of Utah

3. Topic of Conversation: Well RGU #1  
API 43-007-30129  
Entity Action Form

4. Highlights of Conversation:

Mike called with questions regarding submission of  
Entity action form. I explained to him that  
entity numbers are assigned to keep track of  
division of interest of well production. He  
explained that this well is a strat test  
well and will never produce. I told him  
not to worry about submitting the form -  
we will assign a generic number on our own.

(NOTE: Spoke w/RJF concerning this well. Despite RJF/DTS decision of  
11-7-90 to not use API numbering on test wells of this type,  
RJF and FRM made the decision to treat this like a regular well  
since it is in a unit, <sup>may be</sup> regarded as an obligation well for the  
unit by the BLM, and could conceivably be recompleted to produce  
sometime in the future. we will handle similar to a normal oil/gas  
well as far as filing and data processing goes. DTS 1-28-91)



THE RIVER GAS CORPORATION

3600 Watermelon Road, Suite 204  
Northport, Alabama 35476  
Phone (205) 759-3282  
Fax (205) 759-3188

FROM: JOEY STEPHANSON

DATE: 1/30/91

Land Department  
3600 Watermelon Road  
Suite 204  
Northport, Alabama 35476  
Telephone: (205) 759-3282  
Telefax: (205) 759-3188

TO: Brad Hill ( 801-359-3940)

SUBJECT: RGU #1...Sundry Notice

=====

MESSAGE:

I was given this notice late yesterday to forward to your office...  
Please call if you have any questions...Thanks.

This transaction consists of 3 page(s) including this cover page. If an incomplete transaction is received, please contact the sender at The River Gas Corporation, Land Department, (205) 759-3282. Thank you.

**RIVER GAS OF UTAH, INC.**

3600 Watermelon Road, Suite 204  
Northport, Alabama 35476  
Phone (205) 759-3282  
Fax (205) 759-3188

January 30, 1991

UNITED PARCEL SERVICE

Mr. Brad Hill  
Utah Board of Oil, Gas and Mining  
Suite 350, 3 Triad Center  
355 West North Temple  
Salt Lake City, Utah 84180-1203

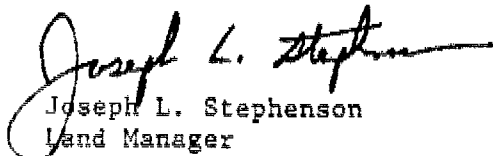
RE: RGU #1 Stratagraphic Well -  
API #43-007-30129

Dear Mr. Hill:

Enclosed is an original and a copy of a Sundry Notice (Form 9) which describes a change of plans from that originally described in our APD. I am sending you a copy of this Sundry Notice over the telecopier so that you can be reviewing it for approval.

Our Drilling Supervisor, Mr. J. Michael Farrens, will be contacting you on this matter. If you should have any questions, please do not hesitate to call me.

Sincerely yours,

  
Joseph L. Stephenson  
Land Manager

Enc.

CC: Eric Jones, BLM  
Ed Bonner, Division of State Lands  
J.R. French, Jr., Texaco

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

**SUNDRY NOTICES AND REPORTS ON WELLS**

Do not use this form for proposals to drill new wells, deepen existing wells, or to reenter plugged and abandoned wells.  
See APPLICATION FOR PERMIT for such proposals.

1. Type of Well <input type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input checked="" type="checkbox"/> Other (specify) <u>Stratigraphic test well</u>		6. Lease Designation and Serial Number <u>ML-39335</u>
2. Name of Operator <u>River Gas of Utah, Inc.</u>		7. Indian Allottee or Tribe Name <u>N/A</u>
3. Address of Operator <u>12031 Lake Nicol Road, Tuscaloosa, AL 35406</u>		8. Unit or Communitization Agreement <u>Drunkards Wash Unit UTU 67921X</u>
4. Telephone Number <u>205-759-3282</u>		9. Well Name and Number <u>RGU #1</u>
5. Location of Well Footage <u>1980' FEL, 755' FNL (NW 1/4 of NE 1/4)</u> Co. Sec. T., R., M.: <u>Section 36, T.14S., R.9E., S.L.B. &amp; M.</u>		10. API Well Number
County: <u>Carbon</u> State: <u>UTAH</u>		11. Field and Pool, or Wildcat <u>Strat Test for Ferron Coal Group</u>

**CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

**NOTICE OF INTENT**  
(Submit in Duplicate)

- |  |   |
|--|---|
| <input type="checkbox"/> Abandonment             | <input type="checkbox"/> New Construction     |
| <input type="checkbox"/> Casing Repair           | <input type="checkbox"/> Pull or Alter Casing |
| <input type="checkbox"/> Change of Plans         | <input type="checkbox"/> Recompletion         |
| <input type="checkbox"/> Conversion to Injection | <input type="checkbox"/> Shoot or Acidize     |
| <input type="checkbox"/> Fracture Treat          | <input type="checkbox"/> Vent or Flare        |
| <input type="checkbox"/> Multiple Completion     | <input type="checkbox"/> Water Shut-Off       |
| <input type="checkbox"/> Other _____             |   |

Approximate Date Work Will Start \_\_\_\_\_

**SUBSEQUENT REPORT**  
(Submit Original Form Only)

- |  |   |
|--|---|
| <input type="checkbox"/> Abandonment             | <input type="checkbox"/> New Construction     |
| <input type="checkbox"/> Casing Repair           | <input type="checkbox"/> Pull or Alter Casing |
| <input type="checkbox"/> Change of Plans         | <input type="checkbox"/> Shoot or Acidize     |
| <input type="checkbox"/> Conversion to Injection | <input type="checkbox"/> Vent or Flare        |
| <input type="checkbox"/> Fracture Treat          | <input type="checkbox"/> Water Shut-Off       |
| <input type="checkbox"/> Other _____             |   |

Date of Work Completion \_\_\_\_\_

Report results of Multiple Completions and Recompletions to different reservoirs on WELL COMPLETION OR RECOMPLETION AND LOG form.  
\* Must be accompanied by a cement verification report.

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

The drilling is being changed as follows:

Size hole:	Size Casing:	Weight per foot:	Setting depth:	Quantity of Cement:
8 3/4"	6 5/8" (ID)	22.2 lbs	200'	30 sacks cement to surface

4"

APPROVED BY THE STATE  
OF UTAH DIVISION OF  
OIL, GAS, AND MINING  
DATE: 1-30-91  
BY: [Signature]

14. I hereby certify that the foregoing is true and correct

Name & Signature

(State Use Only)

Joseph L. Stephens

Title Land Manager

Date 1/30/91

DRILLING LOCATION ASSESSMENT

State of Utah  
Division of Oil, Gas and Mining

43-007-30129 *del*

OPERATOR: RIVER GAS OF UTAH WELL NAME: RGU #1  
SECTION: 36 TWP: 14 S. RNG: 9E LOC: 1980 FEL 755 FNL  
QTR/QTR NW/NE COUNTY: CARBON FIELD: DRUNKARDS WASH UNIT  
SURFACE OWNER: STATE OF UTAH  
SPACING: DRUNKARDS WASH UNIT-STRATIGRAPHIC TEST  
INSPECTOR: BRAD HILL DATE AND TIME: 1/17/91 10:45

PARTICIPANTS: Dan Jarvis-DOGM; Mike Farrens-River Gas; Evan Hansen-Emire Engineering; Bob Johnson & Ron Hall-Boyles Bros. Drilling; Blain Henrie-Henrie Const.

REGIONAL SETTING/TOPOGRAPHY: The proposed location is in an area which lies in the transition between the Mancos Lowland to the east and the Wasatch Plateau to the west. The location is on a gentle slope to the east with a series of low hills to the north.

LAND USE:

CURRENT SURFACE USE: None

PROPOSED SURFACE DISTURBANCE: A 60'X 40' rectangular pad will be constructed for a truck-mounted drill rig. A 20'X 15' pit will be included on the pad. Only minor upgrading of existing roads will be needed for access.

AFFECTED FLOODPLAINS AND/OR WETLANDS: None

FLORA/FAUNA: Dwarf sage, very sparse grass/Deer, Rabbits

ENVIRONMENTAL PARAMETERS

SURFACE GEOLOGY

SOIL TYPE AND CHARACTERISTICS: Clay soil derived from Mancos shale.

SURFACE FORMATION & CHARACTERISTICS: Mancos Shale

EROSION/SEDIMENTATION/STABILITY: No erosion or sedimentation at present. Location should be stable.

PALEONTOLOGICAL POTENTIAL: None observed

SUBSURFACE GEOLOGY

OBJECTIVES/DEPTHS: Stratigraphic test to Ferron Coal Group. 1500'-2200'



ABNORMAL PRESSURES-HIGH AND LOW: None anticipated

CULTURAL RESOURCES/ARCHAEOLOGY: State History has waived survey.

CONSTRUCTION MATERIALS: Onsite materials will be used for construction.

SITE RECLAMATION: Six inches of "topsoil" will be stockpiled for reclamation. Area will be reseeded as per State Lands instructions.

RESERVE PIT

CHARACTERISTICS: A reserve pit will be built on location with dimensions of 20'X 15'X 4'.

LINING: No liner will be required by the Division. River Gas has stated that a 6 mil synthetic liner will be installed.

MUD PROGRAM: surface to 200'/water with bentonite sweeps; 200' to 1500'/air drilled; 1500' to T.D./water with bentonite

DRILLING WATER SUPPLY: Price River Water Improvement District

STIPULATIONS FOR APD APPROVAL

None

ATTACHMENTS

Photographs will be placed on file.



**RIVER GAS OF UTAH, INC.**

3600 Watermelon Road, Suite 204  
Northport, Alabama 35476  
Phone (205) 759-3282  
Fax (205) 759-3188

**COPY**

January 30, 1991

UNITED PARCEL SERVICE

Mr. Brad Hill  
Utah Board of Oil, Gas and Mining  
Suite 350, 3 Triad Center  
355 West North Temple  
Salt Lake City, Utah 84180-1203

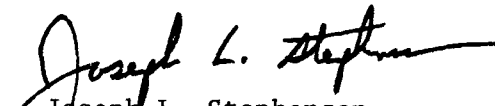
RE: RGU #1 Stratagraphic Well -  
API #43-007-30129

Dear Mr. Hill:

Enclosed is an original and a copy of a Sundry Notice (Form 9) which describes a change of plans from that originally described in our APD. I am sending you a copy of this Sundry Notice over the telecopier so that you can be reviewing it for approval.

Our Drilling Supervisor, Mr. J. Michael Farrens, will be contacting you on this matter. If you should have any questions, please do not hesitate to call me.

Sincerely yours,

  
Joseph L. Stephenson  
Land Manager

Enc.

CC: Eric Jones, BLM  
Ed Bonner, Division of State Lands  
J.R. French, Jr., Texaco

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

COPY

<b>SUNDRY NOTICES AND REPORTS ON WELLS</b> <small>Do not use this form for proposals to drill new wells, deepen existing wells, or to reenter plugged and abandoned wells. Use APPLICATION FOR PERMIT—for such proposals</small>			
<b>1. Type of Well</b> <input type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input checked="" type="checkbox"/> Other (specify) <u>Stratigraphic test well</u>		<b>6. Lease Designation and Serial Number</b> ML-39335	
<b>2. Name of Operator</b> River Gas of Utah, Inc.		<b>7. Indian Allottee or Tribe Name</b> N/A	
<b>3. Address of Operator</b> 12031 Lake Nicol Road, Tuscaloosa, AL 35406		<b>8. Unit or Communitization Agreement</b> Drunkards Wash Unit UTU 67921X	
<b>4. Telephone Number</b> 205-759-3282		<b>9. Well Name and Number</b> RGU #1	
<b>5. Location of Well</b> Footage 1980' FEL, 755' FNL (NW $\frac{1}{4}$ of NE $\frac{1}{4}$ ) QQ, Sec. T., R., M. : Section 36, T.14S., R.9E., S.L.B. & M.		<b>10. API Well Number</b>  	
<b>11. Field and Pool, or Wildcat</b> Strat Test for Ferron Coal Group		<b>12. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA</b>	
<b>NOTICE OF INTENT</b> <small>(Submit in Duplicate)</small> <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <input type="checkbox"/> Abandonment  <input type="checkbox"/> Casing Repair  <input checked="" type="checkbox"/> Change of Plans  <input type="checkbox"/> Conversion to Injection  <input type="checkbox"/> Fracture Treat  <input type="checkbox"/> Multiple Completion  <input type="checkbox"/> Other _____             </div> <div style="width: 48%;"> <input type="checkbox"/> New Construction  <input type="checkbox"/> Pull or Alter Casing  <input type="checkbox"/> Recompletion  <input type="checkbox"/> Shoot or Acidize  <input type="checkbox"/> Vent or Flare  <input type="checkbox"/> Water Shut-Off             </div> </div>		<b>SUBSEQUENT REPORT</b> <small>(Submit Original Form Only)</small> <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <input type="checkbox"/> Abandonment  <input type="checkbox"/> Casing Repair  <input type="checkbox"/> Change of Plans  <input type="checkbox"/> Conversion to Injection  <input type="checkbox"/> Fracture Treat  <input type="checkbox"/> Other _____             </div> <div style="width: 48%;"> <input type="checkbox"/> New Construction  <input type="checkbox"/> Pull or Alter Casing  <input type="checkbox"/> Shoot or Acidize  <input type="checkbox"/> Vent or Flare  <input type="checkbox"/> Water Shut-Off             </div> </div>	
<b>Approximate Date Work Will Start</b> _____		<b>Date of Work Completion</b> _____  <small>Report results of Multiple Completions and Recompletions to different reservoirs on WELL COMPLETION OR RECOMPLETION AND LOG form. • Must be accompanied by a cement verification report.</small>	

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8 3/4"	6 5/8" (ID)	22.2 lbs	200'	30 sacks cement to surface
4"				

14. I hereby certify that the foregoing is true and correct

Name & Signature

(State Use Only)

*Joseph L. Stephens*

Title

Land Manager

Date

1/30/91

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING		6. Lease Designation and Serial Number ML-39335
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2. Name of Operator River Gas of Utah, Inc.		9. Well Name and Number RGU #1
3. Address of Operator <u>12031 Lake Nicol Road, Tuscaloosa, AL 35406</u>		10. API Well Number <u>43-007-30129</u> <i>del</i>
4. Telephone Number <u>205-759-3282</u>		11. Field and Pool, or Wildcat Strat Test for Ferron Coal Group
5. Location of Well Footage <u>1980'</u> FEL, <u>755'</u> FNL (NW $\frac{1}{4}$ of NE $\frac{1}{4}$ ) CC, Sec. T., R., M. : <u>Section 36, T.14S., R.9E., S.L.B. &amp; M.</u>		
County : <u>Carbon</u> State : <u>UTAH</u>		
<b>CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA</b>		
<b>NOTICE OF INTENT</b> (Submit in Duplicate)		<b>SUBSEQUENT REPORT</b> (Submit Original Form Only)
<input type="checkbox"/> Abandonment <input type="checkbox"/> Casing Repair <input checked="" type="checkbox"/> Change of Plans <input type="checkbox"/> Conversion to Injection <input type="checkbox"/> Fracture Treat <input type="checkbox"/> Multiple Completion <input type="checkbox"/> Other _____	<input type="checkbox"/> New Construction <input type="checkbox"/> Pull or Alter Casing <input type="checkbox"/> Recompletion <input type="checkbox"/> Shoot or Acidize <input type="checkbox"/> Vent or Flare <input type="checkbox"/> Water Shut-Off	<input type="checkbox"/> Abandonment * <input type="checkbox"/> Casing Repair <input type="checkbox"/> Change of Plans <input type="checkbox"/> Conversion to Injection <input type="checkbox"/> Fracture Treat <input type="checkbox"/> Other _____  Date of Work Completion _____
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8 3/4"	6 5/8" (ID)	22.2 lbs	200'	30 sacks cement to surface

4''

14. I hereby certify that the foregoing is true and correct

**Name & Signature**

**Title**

Land Manager

Date \_\_\_\_\_

1/30/91

(State Use Only)



**RIVER GAS OF UTAH, INC.**

3600 Watermelon Road, Suite 204  
Northport, Alabama 35476  
Phone (205) 759-3282  
Fax (205) 759-3188

RECEIVED  
JAN 31 1991

DIVISION OF  
OIL, GAS & MINING

January 30, 1991

UNITED PARCEL SERVICE

Mr. Brad Hill  
Utah Board of Oil, Gas and Mining  
Suite 350, 3 Triad Center  
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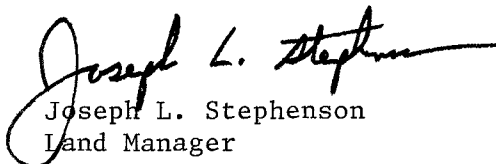
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Sincerely yours,

  
Joseph L. Stephenson  
Land Manager

Enc.

CC: Eric Jones, BLM  
Ed Bonner, Division of State Lands  
J.R. French, Jr., Texaco

WATER PERMIT OK

DIVISION OF OIL, GAS AND MINING

API NO. 43-007-30129

SPODDING INFORMATION

NAME OF COMPANY: RIVER GAS OF UTAH, INC.

WELL NAME: RGU #1

SECTION NWNE 36 TOWNSHIP 14S RANGE 9E COUNTY CARBON

DRILLING CONTRACTOR BOIJLES BROTHERS

RIG # ?

SPODDED: DATE 2-4-91

TIME 1:30 p.m.

HOW ROTARY

DRILLING WILL COMMENCE

REPORTED BY Mike Farrens

TELEPHONE # 801-637-8880

DATE 2-4-91 SIGNED TAS TAKEN BY: D COX

STATE OF UTAH  
DIVISION OF OIL, GAS AND MININGDIVISION OF  
OIL, GAS & MININGRECEIVED  
FEB 15 1991

COPY

## APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work

DRILL ☒DEEPEN ☐PLUG BACK ☐

1b. Type of Well

Oil Well ☐Gas Well ☐Other STRATIGRAPHIC WELL ☐Multiple Zone ☐

2. Name of Operator

RIVER GAS OF UTAH, INC. (TEL 205/759-3282)

3. Address of Operator

12031 LAKE NICOL ROAD, TUSCALOOSA, ALABAMA 35406

4. Location of Well (Report location clearly and in accordance with any State requirements.)

At surface 1980' FEL &amp; 755' FNL (NW 1/4 OF NE 1/4)

At proposed prod zone

SAME

14. Distance in miles and direction from nearest town or post office

THREE (3) MILES SOUTHWEST OF PRICE, UTAH

16. Distance from proposed location to nearest property or lease line, ft.

(Also to nearest str. line, if any)

1980' FEL

18. No. of acres in lease

485.9

17. No. of acres assigned to this well

N/A...STRAT TEST

15. Distance from proposed location to nearest well, drilling, completed, or applied for, on this lease, ft.

NONE

19. Proposed depth

2200'

20. Rotary or cable tools

ROTARY

21. Elevations (Show whether DP, RT, CR, etc.)

5733' surveyed elevation (5810' per topographical map)

22. Approx. date work will start  
Immediately upon permit issuance.

23.

## PROPOSED CASING AND CEMENTING PROGRAM

Size of Hole	Size of Casing	Weight per Foot	Setting Depth	Quantity of Cement
*8 3/4"	6 5/8" (10)	22.2 lb	200'	30 sacks cement to surface
*5 7/8"	4" (10)	11.3 lb	1500'	40 sacks of Class "A" cement to surface

320 sacks of cement will be used to plug well from top to bottom.

\*Cement and casing program can be revised if required by Board of Oil, Gas and Mining.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout prevention program, if any.

24. I hereby certify that this report is true and complete to the best of my knowledge.

Signed: Joseph L. Stephens Title: Land Manager Date: JAN. 16, 1991

(This space for Federal or State office use)

APR NO.

43-007-30129  
/S/ WILLIAM C. STRINGER

Approval Date

Assistant District Manager

Approved by:

Title: for MineralsDate: FEB 11 1991

Conditions of approval, if any:

APPROVED FOR UNIT PURPOSES ONLY

\*See Instructions On Reverse Side

COPY

TOWNSHIP 14 SOUTH

RANGE 9 EAST

5433.90' MEASURED

389° 28' 50" W MEASURED

283.48'

1575.68'

RIVER GAS OF UTAH, INC.  
R.G.U. NO.1  
SET 3/8" x 24" REBAR  
ELEV. = 5797.8

N 0° 30' 30" W (RECORDED)

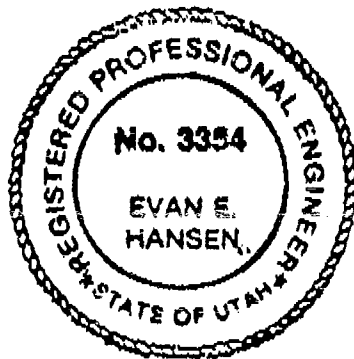
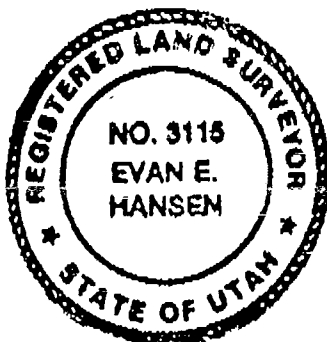
2654.80' MEASURED  
2654.75' RECORDED

36

**BASIS OF ELEVATION**

IS 5733 AS INDICATED ON THE NE COR.  
SEC. 36, T 14 S, R 9 E, S.L.B. & M.  
AS SHOWN ON THE PRICE QUADRANGLE  
7.5 MINUTE SERIES.

SCALE: 1" = 1000'



**ENGINEER'S CERTIFICATE**

I, EVAN E. HANSEN, DO HEREBY CERTIFY THAT I AM A REGISTERED LAND SURVEYOR AND PROFESSIONAL ENGINEER HOLDING CERTIFICATES NO. 3115 AND NO. 3354 AS PRESCRIBED UNDER THE LAWS OF THE STATE OF UTAH. I FURTHER CERTIFY THAT I HAVE MADE A SURVEY OF THE TRACT OF GROUND SHOWN AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.

**BASIS OF BEARING**

BASIS OF BEARING N 0° 30' 30" W RECORDED BETWEEN THE EAST QUARTER CORNER AND THE NORTHEAST CORNER OF SECTION 36, TOWNSHIP 14 SOUTH, RANGE 9 EAST, SALT LAKE BASE AND MERIDIAN AND IS THE UTAH STATE PLANE COORDINATE SYSTEM AS ESTABLISHED BY THE CARBON COUNTY SURVEYOR'S OFFICE.

**LEGEND**

- FOUND ROCK SECTION CORNER
- FOUND BRASS CAP SECTION CORNER
- ◇ FOUND BRASS CAP QUARTER CORNER
- ◇ SEARCHED FOR BUT NOT FOUND

SECTION 36, T 14 S, R 10 E, S.L.B. & M.

**Empire Engineering**

1665 E. SAGEWOOD RD, PRICE, UTAH 84501

RIVER GAS OF UTAH, INC.

R.G.U. NO. 1

Drawn By: TH

Approved By: EEH

Drawing No.

Date: 1-12-91

Scale: 1" = 1000'

EEOG-101 A

Evan E. Hansen  
EVAN E. HANSEN

JAN 12, 1991  
DATE

RIVER GAS OF UTAH, INC.

— ADDITIONAL DRILLING INFORMATION —



STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

SUNDRY NOTICES AND REPORTS ON WELLS																												
Do not use this form for proposals to drill new wells, deepen existing wells, or to reenter plugged and abandoned wells. Use APPLICATION FOR PERMIT— for such proposals																												
<b>1. Type of Well</b> <input type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input checked="" type="checkbox"/> Other (specify)		<b>6. Lease Designation and Serial Number</b> 39335																										
<b>2. Name of Operator</b> River Gas of Utah, Inc.		<b>7. Indian Allottee or Tribe Name</b> N/A																										
<b>3. Address of Operator</b> 12031 Lake Nicol Road, Tuscaloosa, AL 35406		<b>8. Unit or Communitization Agreement</b> Drunkards Wash Unit																										
<b>4. Telephone Number</b> (205) 759-3282		<b>9. Well Name and Number</b> RGU No. 1																										
<b>5. Location of Well</b> Footage : 1980 FEL; 755 FNL      NW/4 of NE/4 CO, Sec. T., R., M. : Section 36-T14S-R9E		<b>10. API Well Number</b> 43-007-30129 PA																										
		<b>11. Field and Pool, or Wildcat</b> Wildcat																										
<b>12. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA</b>																												
<b>NOTICE OF INTENT</b> (Submit in Duplicate) <table style="width: 100%;"> <tr> <td><input type="checkbox"/> Abandonment</td> <td><input type="checkbox"/> New Construction</td> </tr> <tr> <td><input type="checkbox"/> Casing Repair</td> <td><input type="checkbox"/> Pull or Alter Casing</td> </tr> <tr> <td><input type="checkbox"/> Change of Plans</td> <td><input type="checkbox"/> Recompletion</td> </tr> <tr> <td><input type="checkbox"/> Conversion to Injection</td> <td><input type="checkbox"/> Shoot or Acidize</td> </tr> <tr> <td><input type="checkbox"/> Fracture Treat</td> <td><input type="checkbox"/> Vent or Flare</td> </tr> <tr> <td><input type="checkbox"/> Multiple Completion</td> <td><input type="checkbox"/> Water Shut-Off</td> </tr> <tr> <td><input type="checkbox"/> Other _____</td> <td></td> </tr> </table> Approximate Date Work Will Start _____		<input type="checkbox"/> Abandonment	<input type="checkbox"/> New Construction	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> Pull or Alter Casing	<input type="checkbox"/> Change of Plans	<input type="checkbox"/> Recompletion	<input type="checkbox"/> Conversion to Injection	<input type="checkbox"/> Shoot or Acidize	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Vent or Flare	<input type="checkbox"/> Multiple Completion	<input type="checkbox"/> Water Shut-Off	<input type="checkbox"/> Other _____		<b>SUBSEQUENT REPORT</b> (Submit Original Form Only) <table style="width: 100%;"> <tr> <td><input checked="" type="checkbox"/> Abandonment *</td> <td><input type="checkbox"/> New Construction</td> </tr> <tr> <td><input type="checkbox"/> Casing Repair</td> <td><input type="checkbox"/> Pull or Alter Casing</td> </tr> <tr> <td><input type="checkbox"/> Change of Plans</td> <td><input type="checkbox"/> Shoot or Acidize</td> </tr> <tr> <td><input type="checkbox"/> Conversion to Injection</td> <td><input type="checkbox"/> Vent or Flare</td> </tr> <tr> <td><input type="checkbox"/> Fracture Treat</td> <td><input type="checkbox"/> Water Shut-Off</td> </tr> <tr> <td><input type="checkbox"/> Other _____</td> <td></td> </tr> </table> Date of Work Completion <u>3-12-91</u>  Report results of Multiple Completions and Recompletions to different reservoirs on WELL COMPLETION OR RECOMPLETION AND LOG form. * Must be accompanied by a cement verification report.	<input checked="" type="checkbox"/> Abandonment *	<input type="checkbox"/> New Construction	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> Pull or Alter Casing	<input type="checkbox"/> Change of Plans	<input type="checkbox"/> Shoot or Acidize	<input type="checkbox"/> Conversion to Injection	<input type="checkbox"/> Vent or Flare	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Water Shut-Off	<input type="checkbox"/> Other _____	
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<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Water Shut-Off																											
<input type="checkbox"/> Other _____																												

**13. DESCRIBE PROPOSED OR COMPLETED OPERATIONS** (Clearly state all pertinent details, and give pertinent dates. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

Drilled to 1932' and plugged with 150 sx cmt from top to bottom.

Rig released 9:00 a.m. on March 12, 1991, and plate was welded on top of surface casing with well name and location.

RECEIVED

MAR 25 1991

DIVISION OF  
OIL GAS & MINING

14. I hereby certify that the foregoing is true and correct

Name & Signature Michael J. Farrens Michael J. Farrens Title Vice President Date 3-21-91  
 (State Use Only)



**RIVER GAS OF UTAH, INC.**

3600 Watermelon Road, Suite 204  
Northport, Alabama 35476  
Phone (205) 759-3282  
Fax (205) 759-3188

RECEIVED

MAR 25 1991

March 22, 1991

DIVISION OF  
OIL GAS & MINING

Ms. Debra Eatchel  
STATE OF UTAH  
Department of Natural Resources  
Division of Oil, Gas & Mining  
3 Triad Center, Suite 350  
Salt Lake City, UT 84180-1203

Re: RGU No. 1  
API Well Number 43-007-30129

Dear Ms. Eatchel:

Enclosed herewith is the Sundry Notices and Reports on Wells (Form 9) for the above referenced well to be filed with your office.

Should you have any questions, please do not hesitate to call.

Yours very truly,

Michael J. Farrens  
Vice President  
Utah Operations

MJF:kwd

Enclosure

cc:



**RIVER GAS OF UTAH, INC.**

3600 Watermelon Road, Suite 204  
Northport, Alabama 35476  
Phone (205) 759-3282  
Fax (205) 759-3188

April 18, 1991

Ms. Debra Eatchel  
STATE OF UTAH  
Department of Natural Resources  
Division of Oil, Gas & Mining  
3 Triad Center, Suite 350  
Salt Lake City, UT 84180-1203

RECEIVED  
APR 22 1991

Re: RGU No. 1  
API Well Number 43-007-30129  
Drunkards Wash Project

DIVISION OF  
OIL GAS & MINING

Dear Ms. Eatchel:

Pursuant to our telephone conversation, the Well Completion or Recompletion Report and Log (Form 8) is not required on the above-referenced well.

For your information, I am enclosing a set of the electric logs for our well.

Should you have any questions or if additional information is needed, please do not hesitate to call. I appreciate your assistance in this matter.

Sincerely,

*Michael J. Farrens*

Michael J. Farrens  
Vice President  
Utah Operations

MJF:kwd

Enclosures

cc: File RG #28

LONG & SHORT SPACED DENSITY  
GAMMA/CALIPER

GAMMA RAY / NEUTRON POROSITY

rec'd 4-22-91 DOGM

RECEIVED

APR 25 1991

STATE OF UTAH  
DIVISION OF OIL, GAS AND MINING

DIVISION OF  
OIL GAS & MINING

## WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5. LEASE DESIGNATION AND SERIAL NO.

39335

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

N/A

7. UNIT AGREEMENT NAME

Drunkards Wash Unit #UTU67921X

8. FARM OR LEASE NAME

State of Utah

9. WELL NO.

RGU #1

10. FIELD AND POOL, OR WILDCAT

Wildcat

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA

Section 36-T14S-R9E

S.L.B.&amp;M.

12. TYPE OF WELL: OIL WELL ☐ GAS WELL ☐ DEW ☒ Other Stratigraphic

13. TYPE OF COMPLETION:

NEW WELL ☐ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☐ DIFF. RESTR. ☐ Other P&A

2. NAME OF OPERATOR

River Gas of Utah, Inc. 205/759-3282

3. ADDRESS OF OPERATOR

12031 Lake Nicol Road, Tuscaloosa, AL 35406

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)

At surface 1980 FEL 755 FNL NW/4 NE/4

At top prod. interval reported below same

At total depth same

14. API NO.

43-007-30129

DATE ISSUED

01-24-91

12. COUNTY

Carbon

13. STATE

UTAH

15. DATE SPUDDED

02-04-91

16. DATE T.D. REACHED

03-10-91

17. DATE COMPL. (Ready to prod.)

03-13-91

(Plug &amp; Aband.)

18. ELEVATIONS (OF, REB, RT, CR, ETC.)

5797

19. ELEV. CASINGHEAD

5797

20. TOTAL DEPTH, MD &amp; TVD

1932

21. PLUG BACK T.D., MD &amp; TVD

N/A

22. IF MULTIPLE COMPL. HOW MANY

None

23. INTERVALS DRILLED BY

ROTARY TOOLS

1932

CABLE TOOLS

None

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)

None

25. WAS DIRECTIONAL SURVEY MADE

None

26. TYPE ELECTRIC AND OTHER LOGS RUN

Density Gamma Ray and Caliper 4-22-91

27. WAS WELL CORED YES ☒ NO ☐ (Submit analysis)  
DRILL STEM TEST YES ☐ NO ☒ (See reverse side)

## CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	MOLE SIZE	CEMENTING RECORD	AMOUNT POLLED
4"	11.3	200	6-1/4	24 sx	None

## 29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	BACKS CEMENT	SCREEN (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
None							

## 31. PERFORATION RECORD (Interval, size and number)

None

## 32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
None	None

33. None

## PRODUCTION

DATE FIRST PRODUCTION		PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump)				WELL STATUS (Producing or shut-in)	
None							
DATE OF TEST	HOURS TESTED	CHOKES SIZE	PROD'N. FOR TEST PERIOD	OIL—BSL.	GAS—MCF.	WATER—BSL.	GAS-OIL RATIO
			→				
FLDW. TUBING PRIME.	CASING PRESSURE	CALCULATED 24-HOUR RATE	OIL—BSL.	GAS—MCF.	WATER—BSL.	OIL GRAVITY-API (CORR.)	
		→					

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)

TEST WITNESSED BY

35. LIST OF ATTACHMENTS

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED Michael J. Farrons  
Michael J. FarronsTITLE Vice President-Utah OperationsDATE 04-22-91

See Spaces for Additional Data on Reverse Side

## INSTRUCTIONS

This form should be completed in compliance with the Utah Oil and Gas Conservation General Rules. If not filed prior to this time, all logs, tests, and directional surveys as required by Utah Rules should be attached and submitted with this report.

ITEM 18: Indicate which elevation is used as reference for depth measurements given in other spaces on this form and on any attachments.

ITEMS 22 and 24: If this well is completed for separate production from more than one interval zone (multiple completion), so state in item 22, and in item 24 show the producing interval, or intervals, top(s), bottom(s) and name(s) for only the interval reported in item 33. Submit a separate report (page) on this form, adequately identified, for each additional interval to be separately produced, showing the additional data pertinent to such interval.

ITEM 29: "Sacks Cement": Attached supplemental records for this well should show the details of any multiple stage cementing and the location of the cementing tool.

ITEM 33: Submit a separate completion report on this form for each interval to be separately produced (see instruction for items 22 and 24 above).

### 37. SUMMARY OF POROUS ZONES:

Show all important zones of porosity and contents thereof; cored intervals; and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries.

### 23. GEOLOGIC MARKERS

Formation	Top	Bottom	Description, contents, etc.	Name	Top		
					Meas. Depth	True Depth	Depth
Mancos Shale	200	1620	Cored	Mancos	Surf		1620
Ferron	1620	1866	Cored	Ferron	1620		1866
Tununk	1866	1932	Cored	Tununk	1866		1932



**RIVER GAS OF UTAH, INC.**

3600 Watermelon Road, Suite 204  
Northport, Alabama 35476  
Phone (205) 759-3282  
Fax (205) 759-3188

April 22, 1991

Ms. Debra Eatchel  
STATE OF UTAH  
Department of Natural Resources  
Division of Oil, Gas & Mining  
3 Triad Center, Suite 350  
Salt Lake City, UT 84180-1203

Re: RGU No. 1  
API Well Number 43-007-30129

Dear Ms. Eatchel:

Enclosed herewith is the Well Completion or Recompletion Report and Log (Form 8) for the above referenced well to be filed with your office.

Should you have any questions, please do not hesitate to call.

Yours very truly,

Michael J. Farrens  
Vice President  
Utah Operations

MJF:kwd

Enclosure

RECEIVED

APR 25 1991

DIVISION OF  
OIL GAS & MINING

**CORE ANALYSIS RESULTS**

for

**The River Gas Corporation**

**PGU No. 1 Well**

**Wildcat**

**Carbon County, Utah**

**File Number: 57121-91RIV028**

*14S 9E 36*

*43 007 30129*

March 22, 1991

The River Gas Corporation  
3600 Watermelon Road, Suite 204  
Northport, AL 35476

Attn: Mr. Mike Ferrons

Subject:  
Core Analysis Project  
RGU No. 1 Well  
Wildcat  
Carbon County, Utah  
File Number: 57121-91RIV028

Gentlemen:

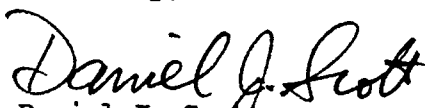
Core Laboratories was requested to analyze core material obtained from the subject well. The following analyses were performed:

1. Plug Type Analysis -- CMS-300
2. Permeability and Porosity and Grain Density.

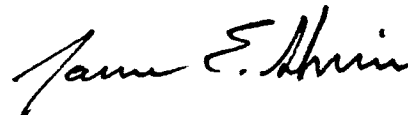
The results of these tests are presented in tabular format within this report. Laboratory test conditions have been included to better assist you in your evaluation of these data.

Thank you for the opportunity to perform these tests for The River Gas Corporation. Should you have any questions pertaining to these test results or if we may be of further assistance, please contact us at (303) 751-9334.

Sincerely,



Daniel J. Scott  
Project Coordinator



James E. Shriver  
Laboratory Supervisor

DJS/tb



CORE MEASUREMENT SYSTEM (CMS) - 300

$$\text{Porosity} = \frac{\text{Direct Measured Pore Volume}}{\text{Bulk Volume}} \times 100$$

$$\text{Porosity} = \frac{\text{Helium Injected Into Pore Space By CMS}}{\text{Pore Volume From CMS} + \text{Boyle's Law Grain Volume}}$$

NOTE: This equation corrects for bulk volume reduction as overburden pressure is applied.

$K_{\infty}$  = Equivalent non-reactive liquid permeability determined by the CMS at up to eight designated net overburden confining stresses. This is an improved flow capacity indicator as gas slippage effects present at low laboratory pore pressure (and not in the reservoir) have been eliminated.

$K_{\text{air}}$  = An estimated air permeability approximating historically furnished core analysis permeability. (This is an optimistic value. Low pore pressures in historical laboratory measurements result in gas slippage not present at reservoir conditions, and hence high permeability values.)

$b$  = A term dependent on (1) pore geometry and (2) gas utilized in the permeability measurement that links  $K_{\infty}$  and  $K_{\text{air}}$  as follows:

$$K_{\text{air}} = K_{\infty} \left( 1 + \frac{b_{\text{air}}}{P_{\text{mean}}} \right)$$

$P_{\text{mean}}$  = The mean pore pressure which is equivalent to the average of the upstream and downstream pressure of the core being tested. This value is lower in a typical laboratory determination than in the reservoir.

Beta = Forcheimer inertial term, needed to account for lost flow rate due to gas inertial and/or kinetic effects as gas flows through rock pores.

# CORE LABORATORIES

Company : River Gas Corporation of Utah  
 Well : RGU No.1  
 Location : Sec.36 T14S R9E  
 Co,State : Carbon, Utah

Field : Wildcat  
 Formation : Ferron Sst/ Mancos Shale  
 Coring Fluid : WBM  
 Elevation : 5797'GL

File No.: 57121-91riv028  
 Date : 17-Mar-1991  
 API No. :  
 Analysts: DW MW PD

## CORE ANALYSIS RESULTS (HYDROSTATIC CONFINEMENT)

SAMPLE NUMBER	DEPTH  ft	NET OVERBURDEN (800 psi)					POROSITY (HELIUM)  %	GRAIN DENSITY  gm/cc	DESCRIPTION
		K <sub>o</sub>	K <sub>air</sub>	φ	b(He)	BETA			
		md	md	%	psi	ft(-1)			
Routine Analysis for Selected Samples									
Plug Samples from Ferron Sandstone									
1	1536.7	0.197	0.318	9.2	37.94	1.6066E12	9.0	2.65	Sst gry vf-f gr sli calc pp por
2	1545.3	0.025	0.043	9.1	51.58	1.4225E15	9.0	2.66	Sst gry vf-f gr sli calc pp por
Plug Samples from Mancos Shale									
3	1683.3	0.075	0.109	6.5	31.03	1.0508E13	6.6	2.61	Sst dk gry vf gr arg carb pyr coal incl
Plug Sample from the Tununk Shale member									
4	1684.3	0.007	0.013	2.7	71.44	3.0796E14	2.5	2.54	Sltst dk gry vf gr arg carb pyr coal incl

# CORE LABORATORIES

Company : River Gas Corporation of Utah  
Well : RGU No.1

Field : Wildcat  
Formation : MANCOS SHALE

File No.: 57121-91riv028  
Date : 17-Mar-1991

## TABLE I

### SUMMARY OF CORE DATA

ZONE AND CUTOFF DATA		CHARACTERISTICS REMAINING AFTER CUTOFFS	
ZONE:		PERMEABILITY:	
Identification -----	Mancos Shale	Flow Capacity -----	0.1 md-ft
Top Depth -----	1683.0 ft	Arithmetic Average ----	0.041 md
Bottom Depth -----	1685.0 ft	Geometric Average -----	0.022 md
Number of Samples -----	2	Harmonic Average -----	0.012 md
DATA TYPE:		Minimum -----	0.007 md
Porosity -----	$\phi$ (800 psi)	Maximum -----	0.075 md
Permeability -----	K <sub>o</sub> (800 psi)	Median -----	0.041 md
CUTOFFS:		Standard Dev. (Geom) --	K $\cdot 10^{\pm 0.740}$ md
Porosity (Minimum) -----	0.0 %	HETEROGENEITY (Permeability):	
Porosity (Maximum) -----	100.0 %	Dykstra-Parsons Var. --	0.000
Permeability (Minimum) ---	0.0000 md	Lorenz Coefficient ----	0.331
Permeability (Maximum) ---	100000. md	AVERAGE SATURATIONS (Pore Volume):	
Water Saturation (Maximum)		Oil -----	
Oil Saturation (Minimum) -		Water -----	
Grain Density (Minimum) --	2.00 gm/cc		
Grain Density (Maximum) --	3.00 gm/cc		
Lithology Excluded -----	NONE		
ZONE:		POROSITY:	
Number of Samples -----	2	Storage Capacity -----	9.2 $\phi$ -ft
Thickness Represented -	2.0 ft	Arithmetic Average ----	4.6 %
		Minimum -----	2.7 %
		Maximum -----	6.5 %
		Median -----	4.6 %
		Standard Deviation ----	$\pm 2.7$ %
GRAIN DENSITY:			
Arithmetic Average ----	2.57 gm/cc		
Minimum -----	2.54 gm/cc		
Maximum -----	2.61 gm/cc		
Median -----	2.57 gm/cc		
Standard Deviation ----	$\pm 0.05$ gm/cc		

# CORE LABORATORIES

Company : River Gas Corporation of Utah  
Well : RGU No.1

Field : Wildcat  
Formation : FERRON SST

File No.: 57121-91riv028  
Date : 17-Mar-1991

## TABLE I

### SUMMARY OF CORE DATA

ZONE AND CUTOFF DATA		CHARACTERISTICS REMAINING AFTER CUTOFFS	
ZONE:		ZONE:	
Identification -----	Ferron Sst	Number of Samples -----	2
Top Depth -----	1536.0 ft	Thickness Represented -	2.0 ft
Bottom Depth -----	1546.0 ft		
Number of Samples -----	2		
DATA TYPE:		POROSITY:	
Porosity -----	$\phi$ (800 psi)	Storage Capacity -----	18.3 $\phi$ -ft
Permeability -----	K <sub>o</sub> (800 psi)	Arithmetic Average ----	9.1 %
		Minimum -----	9.1 %
		Maximum -----	9.2 %
		Median -----	9.1 %
		Standard Deviation ----	$\pm 0.1$ %
CUTOFFS:		GRAIN DENSITY:	
Porosity (Minimum) -----	0.0 %	Arithmetic Average ----	2.66 gm/cc
Porosity (Maximum) -----	100.0 %	Minimum -----	2.65 gm/cc
Permeability (Minimum) ---	0.0000 md	Maximum -----	2.66 gm/cc
Permeability (Maximum) ---	100000. md	Median -----	2.66 gm/cc
Water Saturation (Maximum)		Standard Deviation ----	$\pm 0.01$ gm/cc
Oil Saturation (Minimum) -			
Grain Density (Minimum) --	2.00 gm/cc		
Grain Density (Maximum) --	3.00 gm/cc		
Lithology Excluded -----	NONE		
		PERMEABILITY:	
		Flow Capacity -----	0.2 md-ft
		Arithmetic Average ----	0.111 md
		Geometric Average ----	0.070 md
		Harmonic Average -----	0.044 md
		Minimum -----	0.025 md
		Maximum -----	0.197 md
		Median -----	0.111 md
		Standard Dev. (Geom) --	K $\cdot 10^{\pm 0.635}$ md
		HETEROGENEITY (Permeability):	
		Dykstra-Parsons Var. --	0.000
		Lorenz Coefficient ----	0.450
		AVERAGE SATURATIONS (Pore Volume):	
		Oil -----	
		Water -----	



## CORE LABORATORIES

---

### CORE ANALYSIS RESULTS

for

The River Gas Corporation

FW No. 1 Well

Wildcat

Carbon County, Utah

File Number: 57121-91RIV028

March 22, 1991

The River Gas Corporation  
3600 Watermelon Road, Suite 204  
Northport, AL 35476

Attn: Mr. Mike Ferrons

Subject:  
Core Analysis Project  
RGU No. 1 Well  
Wildcat  
Carbon County, Utah  
File Number: 57121-91RIV028

Gentlemen:

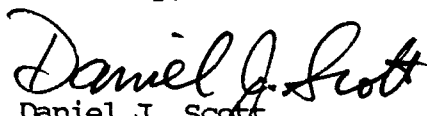
Core Laboratories was requested to analyze core material obtained from the subject well. The following analyses were performed:

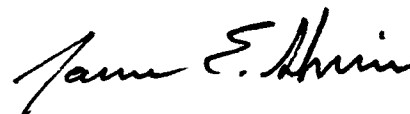
1. Plug Type Analysis — CMS-300
2. Permeability and Porosity and Grain Density.

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Sincerely,

  
Daniel J. Scott  
Project Coordinator

  
James E. Shriver  
Laboratory Supervisor

DJS/tb

CORE MEASUREMENT SYSTEM (CMS) - 300

$$\text{Porosity} = \frac{\text{Direct Measured Pore Volume}}{\text{Bulk Volume}} \times 100$$

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Company : River Gas Corporation of Utah  
 Well : RGU No.1  
 Location : Sec.36 T14S R9E  
 Co,State : Carbon, Utah

Field : Wildcat  
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 API No. :  
 Analysts: DW MW PD

## CORE ANALYSIS RESULTS (HYDROSTATIC CONFINEMENT)

SAMPLE NUMBER	DEPTH  ft	NET OVERBURDEN (800 psi)					POROSITY (HELIUM)  %	GRAIN DENSITY  gm/cc	DESCRIPTION
		K <sub>a</sub>  md	K <sub>air</sub>  md	φ  %	b(He)  psi	BETA  ft(-1)			
Routine Analysis for Selected Samples									
Plug Samples from Ferron Sandstone									
1	1536.7	0.197	0.318	9.2	37.94	1.6066E12	9.0	2.65	Sst gry vf-f gr sli calc pp por
2	1545.3	0.025	0.043	9.1	51.58	1.4225E15	9.0	2.66	Sst gry vf-f gr sli calc pp por
Plug Samples from Mancos Shale									
3	1683.3	0.075	0.109	6.5	31.03	1.0508E13	6.6	2.61	Sst dk gry vf gr arg carb pyr coal incl
Plug Sample from the Tununk Shale member									
4	1684.3	0.007	0.013	2.7	71.44	3.0796E14	2.5	2.54	Sltst dk gry vf gr arg carb pyr coal incl



## CORE LABORATORIES

Company : River Gas Corporation of Utah  
Well : RGU No.1

Field : Wildcat  
Formation : Ferron Sst/ Mancos Shale  
File No.: 57121-91riv028  
Date : 17-Mar-1991

### ANALYTICAL PROCEDURES AND QUALITY ASSURANCE

#### HANDLING & CLEANING

Core Transportation : UPS to Aurora Core Laboratories  
Solvent : Toluene  
Extraction Equipment : Centrifuge  
Extraction Time : No Extraction Performed  
Drying Equipment : Humidity Oven  
Drying Time : 48 Hours  
Drying Temperature : 145 Degree Fahrenheit 45% Humidity

#### ANALYSIS

Grain volume measured by Boyle's Law in a matrix cup using He  
Bulk volume measured by calipering  
Bulk volume by Archimedes Principle  
Permeabilities measured on one in. diameter drilled plugs

#### REMARKS

The core material is being stored at our Aurora facility by request from Mr. Mike Ferrons.

## CORE LABORATORIES

Company : River Gas Corporation of Utah  
Well : RGU No.1

Field : Wildcat  
Formation : MANCOS SHALE

File No.: 57121-91riv028  
Date : 17-Mar-1991

### TABLE I

## S U M M A R Y   O F   C O R E   D A T A

ZONE AND CUTOFF DATA		CHARACTERISTICS REMAINING AFTER CUTOFFS			
<b>ZONE:</b>		<b>ZONE:</b>		<b>PERMEABILITY:</b>	
Identification -----	Mancos Shale	Number of Samples -----	2	Flow Capacity -----	0.1 md-ft
Top Depth -----	1683.0 ft	Thickness Represented -	2.0 ft	Arithmetic Average ----	0.041 md
Bottom Depth -----	1685.0 ft			Geometric Average -----	0.022 md
Number of Samples -----	2			Harmonic Average -----	0.012 md
<b>DATA TYPE:</b>		<b>POROSITY:</b>		Minimum -----	0.007 md
Porosity -----	$\phi$ (800 psi)	Storage Capacity -----	9.2 $\phi$ -ft	Maximum -----	0.075 md
Permeability -----	K <sub>a</sub> (800 psi)	Arithmetic Average ----	4.6 %	Median -----	0.041 md
		Minimum -----	2.7 %	Standard Dev. (Geom) --	K · 10 <sup>±0.740</sup> md
		Maximum -----	6.5 %		
		Median -----	4.6 %		
		Standard Deviation ---	±2.7 %		
<b>CUTOFFS:</b>		<b>GRAIN DENSITY:</b>		<b>HETEROGENEITY (Permeability):</b>	
Porosity (Minimum) -----	0.0 %			Dykstra-Parsons Var. --	0.000
Porosity (Maximum) -----	100.0 %			Lorenz Coefficient ----	0.331
Permeability (Minimum) ---	0.0000 md				
Permeability (Maximum) ---	100000. md				
Water Saturation (Maximum)		Arithmetic Average ----	2.57 gm/cc	<b>AVERAGE SATURATIONS (Pore Volume):</b>	
Oil Saturation (Minimum) -		Minimum -----	2.54 gm/cc	Oil -----	
Grain Density (Minimum) --	2.00 gm/cc	Maximum -----	2.61 gm/cc	Water -----	
Grain Density (Maximum) --	3.00 gm/cc	Median -----	2.57 gm/cc		
Lithology Excluded -----	NONE	Standard Deviation ---	±0.05 gm/cc		

# CORE LABORATORIES

Company : River Gas Corporation of Utah  
Well : RGU No.1

Field : Wildcat  
Formation : FERRON SST

File No.: 57121-91riv028  
Date : 17-Mar-1991

## TABLE I

### SUMMARY OF CORE DATA

ZONE AND CUTOFF DATA		CHARACTERISTICS REMAINING AFTER CUTOFFS	
ZONE:		ZONE:	
Identification -----	Ferron Sst	Number of Samples -----	2
Top Depth -----	1536.0 ft	Thickness Represented -	2.0 ft
Bottom Depth -----	1546.0 ft		
Number of Samples -----	2		
DATA TYPE:		POROSITY:	
Porosity -----	$\phi$ (800 psi)	Storage Capacity -----	18.3 $\phi$ -ft
Permeability -----	K $\phi$ (800 psi)	Arithmetic Average ----	9.1 %
		Minimum -----	9.1 %
		Maximum -----	9.2 %
		Median -----	9.1 %
		Standard Deviation ----	$\pm 0.1$ %
CUTOFFS:		GRAIN DENSITY:	
Porosity (Minimum) -----	0.0 %	Arithmetic Average ----	2.66 gm/cc
Porosity (Maximum) -----	100.0 %	Minimum -----	2.65 gm/cc
Permeability (Minimum) ---	0.0000 md	Maximum -----	2.66 gm/cc
Permeability (Maximum) ---	100000. md	Median -----	2.66 gm/cc
Water Saturation (Maximum)		Standard Deviation ----	$\pm 0.01$ gm/cc
Oil Saturation (Minimum) -			
Grain Density (Minimum) --	2.00 gm/cc		
Grain Density (Maximum) --	3.00 gm/cc		
Lithology Excluded -----	NONE		
		PERMEABILITY:	
		Flow Capacity -----	0.2 md-ft
		Arithmetic Average ----	0.111 md
		Geometric Average ----	0.070 md
		Harmonic Average -----	0.044 md
		Minimum -----	0.025 md
		Maximum -----	0.197 md
		Median -----	0.111 md
		Standard Dev. (Geom) --	K $\cdot 10^{\pm 0.635}$ md
		HETEROGENEITY (Permeability):	
		Dykstra-Parsons Var. --	0.000
		Lorenz Coefficient ----	0.450
		AVERAGE SATURATIONS (Pore Volume):	
		Oil -----	
		Water -----	



**RIVER GAS OF UTAH, INC.**

3600 Watermelon Road, Suite 204  
Northport, Alabama 35476  
Phone (205) 759-3282  
Fax (205) 759-3188

May 30, 1991

Ms. Debra Eatchel  
STATE OF UTAH  
Department of Natural Resources  
Division of Oil, Gas & Mining  
3 Triad Center, Suite 350  
Salt Lake City, UT 84180-1203

Re: RGU No. 1  
API Well Number 43-007-30129 *Sec. 36, T. 14S, R. 9E*  
Drunkards Wash Project

Dear Ms. Eatchel:

Pursuant to your request, please find enclosed a copy of the core analysis by Core Laboratories and the mud well.

Should you have any questions or if additional information is needed, please do not hesitate to call.

Sincerely,

Michael J. Farrens  
Vice President  
Utah Operations

MJF:kwd

Enclosures

cc: File RG #28

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JUN 03 1991

DIVISION OF  
OIL GAS & MINING



# State of Utah

## DEPARTMENT OF ENVIRONMENTAL QUALITY DIVISION OF WATER QUALITY

Norman H. Bangerter  
Governor  
Kenneth L. Alkema  
Executive Director  
Don A. Ostler, P.E.  
Director

288 North 1460 West  
Salt Lake City, Utah  
(801) 538-6146  
(801) 538-6016 Fax

Reply to: State of Utah  
Division of Water Quality  
Department of Environmental Quality  
Salt Lake City, Utah 84114-4870

September 24, 1991

Michael J. Farrens  
River Gas of Utah, Inc.  
3600 Watermelon Road, Suite 204  
Northport, Alabama 35476

RE: Proposed Discharge of Produced Water  
from Coalbed Gas Recovery Wells

Dear Mr. Farrens:

We have reviewed your August 7, 1991 letter requesting permission to discharge coalbed gas recovery water to Drunkards Wash near Price. As indicated in the August 9, 1991 conversation with Steven McNeal, this type of water with high total dissolved solids concentrations is not considered acceptable for coverage by a general permit. Furthermore, the Colorado River Basin Salinity Control Forum policies and the state's antidegradation policy may preclude issuance of an individual permit.

An injection well or disposal pond regulated by the Division of Oil, Gas & Mining are the usual disposal methods for high TDS water from gas wells. You should contact their office if you desire to pursue one of those alternatives. Other alternatives such as, land application or evaporation ponds, etc., may be considered, however, they would be subject to applicable groundwater permitting requirements.

Please contact Steven McNeal or Kiran Bhayani of this office at (801) 538-6146, if you have further questions.

Sincerely,

Utah Water Quality Board

Don A. Ostler, P.E.  
Executive Secretary

DAO:SRM:ja

cc: EPA Region VIII, Water Management  
Southeastern Utah District Health Department  
Division of Oil, Gas & Mining  
David Ariotti, District Engineer

S:FARRENS.LTR

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OIL GAS & MINING

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

4300730129  
145 9E 36

6. Lease Designation and Serial Number N/A	
7. Indian Allottee or Tribe Name N/A	
8. Unit or Communitization Agreement N/A	
9. Well Name and Number N/A	
10. API Well Number N/A	
11. Field and Pool, or Wildcat N/A	

### SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, deepen existing wells, or to reenter plugged and abandoned wells.  
Use APPLICATION FOR PERMIT— for such proposals

1. Type of Well <input type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input checked="" type="checkbox"/> Other (specify)		2. Name of Operator River Gas of Utah, Inc.	
3. Address of Operator 3600 Watermelon Road, Suite 204, Northport, AL 35476		4. Telephone Number 205-759-3282	
5. Location of Well Footage : CC, Sec. T., R., M. : VARIOUS		County : State : UTAH	

12. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA			
<b>NOTICE OF INTENT</b> (Submit in Duplicate)		<b>SUBSEQUENT REPORT</b> (Submit Original Form Only)	
<input type="checkbox"/> Abandonment <input type="checkbox"/> Casing Repair <input type="checkbox"/> Change of Plans <input type="checkbox"/> Conversion to Injection <input type="checkbox"/> Fracture Treat <input type="checkbox"/> Multiple Completion <input type="checkbox"/> Other <u>Permission to dispose of produced water.</u>	<input type="checkbox"/> New Construction <input type="checkbox"/> Pull or Alter Casing <input type="checkbox"/> Recompletion <input type="checkbox"/> Shoot or Acidize <input type="checkbox"/> Vent or Flare <input type="checkbox"/> Water Shut-Off	<input type="checkbox"/> Abandonment * <input type="checkbox"/> Casing Repair <input type="checkbox"/> Change of Plans <input type="checkbox"/> Conversion to Injection <input type="checkbox"/> Fracture Treat <input type="checkbox"/> Other _____	<input type="checkbox"/> New Construction <input type="checkbox"/> Pull or Alter Casing <input type="checkbox"/> Shoot or Acidize <input type="checkbox"/> Vent or Flare <input type="checkbox"/> Water Shut-Off
Approximate Date Work Will Start _____		Date of Work Completion _____	
<small>Report results of Multiple Completions and Recompletions to different reservoirs on WELL COMPLETION OR RECOMPLETION AND LOG form. * Must be accompanied by a cement verification report.</small>			

13. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

River Gas of Utah, Inc. respectfully request permission to dispose of produced water from our Pilot wells and any subsequent wells drilled. Please see the attached letter from Price River Water Improvement District granting us permission to dispose of the water into their sewer system. I have also enclosed copies of our last three water analysis for your information.

\* **APPROVED BY THE STATE  
OF UTAH DIVISION OF  
OIL, GAS, AND MINING**  
 DATE: 7-16-92  
 BY: [Signature]  
 SEE ATTACHED

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 OIL GAS & MINING

14. I hereby certify that the foregoing is true and correct

Name & Signature Michael J. Farrens Michael J. Farrens Title Vice-President Date 7/10/92  
 (State Use Only)

Utah Division of Oil, Gas and Mining

Attachment to Sundry Notice and Report on Wells  
dated July 10, 1992

Subject: Request of River Gas of Utah, Inc. (RGU) for permission  
to dispose of produced water in the Price River Water  
Improvement District (PRWID) sewer system.

Conditions of Approval:

- 1) Approval is valid only while operations are in compliance and in accordance with any agreement entered into and between RGU and the PRWID for such disposal activities.
- 2) A copy of any signed agreement with PRWID will be provided to the Division.
- 3) This approval is applicable to water produced from RGU's wells in the Drunkard's Wash area as part of their coalbed methane production activities.

**PR** PRICE RIVER WATER  
**WID** IMPROVEMENT-DISTRICT

P.O. Box 903  
265 South Fairgrounds Road  
Price, Utah 84501  
Telephone (801) 637-6350  
FAX (801) 637-6374

June 30, 1992

River Gas Of Utah, Inc.  
3600 Watermelon Road, Suite 204  
Northport, Alabama 35476

Attention Micheal J. Farrens

Dear Mike

The District has reviewed your connection proposal dated June 23, 1992 and found it to be acceptable. RGU and the District will enter into a Two Year Agreement with the following items to be included in the agreement:

1. Connection fee for the pilot program
2. Monthly usage charge
3. Parameters to be tested and cost to RGU
4. Restrictions on quality of RGU discharge
5. Duration and dates of agreement
6. Other inclusions that may arise before the agreement is signed.

The District wishes you well on your project. If you have any questions regarding this feel free to contact me at any time, at the District's service Center, 801-637-6350.

Sincerely

  
Rodney Ivie  
Assistant Manager



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DIVISION OF  
OIL GAS & MINING





A Procter & Gamble Co.

P.O. Box 217  
Roosevelt, Utah 84066

Office (801) 722-5066  
Fax (801) 722-5727

## WATER ANALYSIS REPORT

COMPANY RIVER GAS ADDRESS \_\_\_\_\_ DATE: 10-16-91

SOURCE State 25-9-1 DATE SAMPLED 10-15 ANALYSIS NO. \_\_\_\_\_

Analysis

Mg/l (ppm)

\*Meq/l

1. PH	<u>7.4</u>		
2. H <sub>2</sub> S (Qualitative)	<u>1.5</u>		
3. Specific Gravity	<u>1.002</u>		
4. Dissolved Solids		<u>3889</u>	
5. Suspended Solids			
6. Anaerobic Bacterial Count	<u>CI</u>	<u>C/MI</u>	
7. Methyl Orange Alkalinity (CaCO <sub>3</sub> )			
8. Bicarbonate (HCO <sub>3</sub> )		HCO <sub>3</sub> <u>860</u>	<u>÷61</u> <u>14</u> HCO <sub>3</sub>
9. Chlorides (Cl)		Cl <u>750</u>	<u>÷35.5</u> <u>21</u> Cl
10. Sulfates (SO <sub>4</sub> )		SO <sub>4</sub> <u>1000</u>	<u>÷48</u> <u>21</u> SO <sub>4</sub>
11. Calcium (Ca)		Ca <u>48</u>	<u>÷20</u> <u>2</u> Ca
12. Magnesium (Mg)		Mg <u>12</u>	<u>÷12.2</u> <u>1</u> Mg
13. Total Hardness (CaCO <sub>3</sub> )		<u>170</u>	
14. Total Iron (Fe)		<u>22</u>	
15. Barium (Qualitative)			
16. Phosphate Residuals			

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\*Milli equivalents per liter

### PROBABLE MINERAL COMPOSITION

2	Ca	←	HCO <sub>3</sub>	14
1	Mg	→	SO <sub>4</sub>	21
53	Na	→	Cl	21

#### Saturation Values

Ca CO<sub>3</sub>

Ca SO<sub>4</sub> · 2H<sub>2</sub>O

Mg CO<sub>3</sub>

#### Distilled Water 20°C

13 Mg/l

2,090 Mg/l

103 Mg/l

Compound	Eqv. Wt.	X	Meq/l	=	Mg/l
Ca (HCO <sub>3</sub> ) <sub>2</sub>	81.04		<u>2</u>		<u>162</u>
Ca SO <sub>4</sub>	68.07				
Ca Cl <sub>2</sub>	55.50				
Mg (HCO <sub>3</sub> ) <sub>2</sub>	73.17		<u>1</u>		<u>73</u>
Mg SO <sub>4</sub>	60.19				
Mg Cl <sub>2</sub>	47.62				
Na HCO <sub>3</sub>	84.00		<u>11</u>		<u>924</u>
Na <sub>2</sub> SO <sub>4</sub>	71.03		<u>21</u>		<u>1491</u>
Na Cl	58.46		<u>21</u>		<u>1228</u>

REMARKS \_\_\_\_\_

165 E. Railroad Avenue

Green River, WY 82935

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DIVISION OF  
OIL GAS & MINING



Phoenix Laboratories, Inc.

(307) 875-8968

CUSTOMER # 1013  
PHOENIX LAB # 1055

CUSTOMER River Gas Of Utah  
3600 Watermelon Road  
Suite 204  
Northport, AL 35476

SAMPLE SOURCE  
Production Water from Price,

OTHER SAMPLE INFORMATION

DATE SAMPLED 9/13/91

CATIONS:	MG/L	MEQ/L
sodium	2047.7	89.1
potassium	15.6	0.4
calcium	35.9	1.8
magnesium	17.0	1.4

TOTAL CATIONS 92.7

ANIONS:	MG/L	MEQ/L
sulfate	139.6	2.9
chloride	1363.4	38.5
carbonate	0.0	0.0
bicarbonate	3211.7	52.7
hydroxide	0.0	0.0

TOTAL ANIONS 94.01

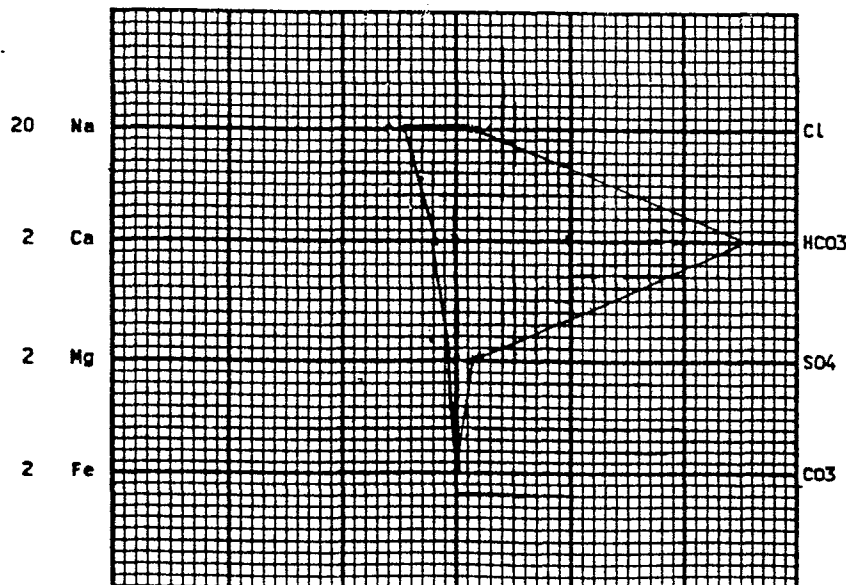
	MG/L
NACL EQUIVALENT	4432
CALC TDS* (365 deg f)	5314
API TDS*	5260

Conductivity @ 68 deg 1.355

Observed pH 7.8

\*total dissolved solids

WATER ANALYSIS PATTERN  
Scale  
MEQ per Unit



(Na value in graph  
includes Na and K)

NOTE: MG/L = milligrams  
per liter  
MEQ/L = milligram  
equivalent  
per liter

Sodium Chloride equivalent  
by Dunlap & Hawthorne -  
calculation from components

ANAEROBIC BACTERIAL COUNT

RIVER GAS		C/ML
25-9-1	9-3-91	0
	9-5-91	1-9
	9-13-91	1-9
State 25-9-1	8-27-91	0
	9-7-91	1-9

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DIVISION OF  
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A Procter & Gamble Co.

P.O. Box 217  
Roosevelt, Utah 84066

Office (801) 722-5066  
Fax (801) 722-5727

## WATER ANALYSIS REPORT

COMPANY River Gas ADDRESS \_\_\_\_\_ DATE: 9-17-91  
SOURCE State 25-9-1 DATE SAMPLED \_\_\_\_\_ ANALYSIS NO. \_\_\_\_\_

	Analysis	Mg/l (ppm)	*Meq/l
1. PH	<u>7.5</u>		
2. H <sub>2</sub> S (Qualitative)	<u>0</u>		
3. Specific Gravity	<u>1.005</u>		
4. Dissolved Solids		<u>5,224</u>	
5. Suspended Solids		<u>52</u>	
6. Anaerobic Bacterial Count	<u>CI</u> C/MI		
7. Methyl Orange Alkalinity (CaCO <sub>3</sub> )			
8. Bicarbonate (HCO <sub>3</sub> )	HCO <sub>3</sub> <u>1,360</u>	<u>÷61</u>	<u>22</u> HCO <sub>3</sub>
9. Chlorides (Cl)	Cl <u>2,000</u>	<u>÷35.5</u>	<u>56</u> Cl
10. Sulfates (SO <sub>4</sub> )	SO <sub>4</sub> <u>60</u>	<u>÷48</u>	<u>1</u> SO <sub>4</sub>
11. Calcium (Ca)	Ca <u>44</u>	<u>÷20</u>	<u>2</u> Ca
12. Magnesium (Mg)	Mg <u>12</u>	<u>÷12.2</u>	<u>1</u> Mg
13. Total Hardness (CaCO <sub>3</sub> )		<u>160</u>	
14. Total Iron (Fe)		<u>20.0</u>	
15. Barium (Qualitative)			
16. Phosphate Residuals			

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OIL GAS & MINING

\*Milli equivalents per liter

### PROBABLE MINERAL COMPOSITION

	Compound	Equiv. Wt.	X	Meq/l	=	Mg/l
2	Ca (HCO <sub>3</sub> ) <sub>2</sub>	81.04		2		162
1	Ca SO <sub>4</sub>	68.07				
	Ca Cl <sub>2</sub>	55.50				
76	Mg (HCO <sub>3</sub> ) <sub>2</sub>	73.17		1		73
	Mg SO <sub>4</sub>	60.19				
	Mg Cl <sub>2</sub>	47.62				
	Na HCO <sub>3</sub>	84.00		19		1596
	Na <sub>2</sub> SO <sub>4</sub>	71.03		1		71
	Na Cl	58.46		56		3274

Saturation Values	Distilled Water 20°C
Ca CO <sub>3</sub>	13 Mg/l
Ca SO <sub>4</sub> · 2H <sub>2</sub> O	2,090 Mg/l
Mg CO <sub>3</sub>	103 Mg/l

REMARKS Suspended solids contain iron, and carbonates



**RIVER GAS OF UTAH, INC.**

3600 Watermelon Road, Suite 204  
Northport, Alabama 35476  
Phone (205) 759-3282  
Fax (205) 759-3188

July 10, 1992

Mr. Gil Hunt  
Manager  
State of Utah Natural Resources  
Underground Injection Control Program  
3 Triad Center, Suite 350  
Salt Lake City, UT 84180-1203

RE: Permission to Dispose of Production Water

Dear Mr. Hunt:

Per our conversation I have enclosed is a copy of a Sundry Notice, letter from Price River Water Improvement District granting us their permission to dispose, and our last 3 water analysis from the State 25-9-1 well already drilled in this area. We respectfully request permission from the State of Utah to dispose of production water from our Pilot wells and any subsequent wells drilled.

We appreciate your consideration in this matter. Should you need additional information please give me a call.

Sincerely,

Michael J. Farrens  
Vice-President

MJF/djl

Enclosures

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JUL 15 1992

DIVISION OF  
OIL GAS & MINING